SOUTHERN AFRICA DEVELOPMENT COMMUNITY

SUBREGIONAL REPORT

IMPLEMENTATION OF AGENDA 21: REVIEW OF PROGRESS MADE SINCE THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT, 1992

Information Provided by the Southern African Development Community (SADC) to the United Nations Commission on Sustainable Development
Fifth Session
7-25 April 1997
New York

United Nations Department for Policy Coordination and Sustainable Development
Division for Sustainable Development
The Information contained in this Country Profile is also available on the World Wide Web, as follows:
http://www.un.org/dpcsd/earthsummit

E/CN.17/1997/MISC.73

97-16490

SOUTHERN AFRICA DEVELOPMENT COMMUNITY

This country profile has been provided by:

Name of Ministry/Office:
Information Section
SADC Environment and Land Management Sector Unit

Date: April 15, 1997

Submitted by: Pernilla Strid

Mailing address: Private Bag A284, Maseru 100, Lesotho

Telephone: 266-312158

Telefax: 266-310190

E-mail: elmsinfo@lesoff.co.za

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All statistics are rendered as provided by the respective Governments.

ABOUT SADC ELMS

In November 1981 the Council of Ministers of the Southern African Development Coordination Conference (SADCC) decided to entrust the Government of Lesotho with the responsibility for coordinating regional activities relating to Soil and Water Conservation and Land Utilization (SWCLU). The SWCLU Sector Coordination Unit was established within the Ministry of Agriculture, Co-operatives and Marketing, Lesotho, in 1985.

At its August 1991 meeting, the SADCC Council of Ministers approved a proposal for a broadened mandate for the SWCLU Sector, charging it with the overall responsibility for environmental coordination in the SADC region. At the same meeting, the Council also approved that the Sector's name be changed to SADC Environment and Land Management Sector (ELMS).

With the signing, by the SADC Heads of State or Government, of a Declaration, Treaty and Protocol on regional economic integration (in August, 1992), SADCC's name was also changed to *Southern African Development Community* (SADC).

The SADC member States are: Angola, Botswana, Lesotho, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe.

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ACRONYMS

APELL	Awareness and Preparedness for Emergencies at Local Level
CFC	chlorofluorocarbon
CGIAR	Consultative Group on International Agriculture Research
CILSS	Permanent Inter-State Committee on Drought Control in the Sahel
EEZ	exclusive economic zone
ECA	Economic Commission for Africa
ECE	Economic Commission for Europe
ECLAC	Economic Commission for Latin America and the Caribbean
ELCI	Environmental Liaison Centre International
EMINWA	environmentally sound management of inland water
ESCAP	Economic and Social Commission for Asia and the Pacific
ESCWA	Economic and Social Commission for Western Asia
FAO	Food and Agriculture Organization of the United Nations
GATT	General Agreement on Tariffs and Trade
GAW	Global Atmosphere Watch (WMO)
GEF	Global Environment Facility
GEMS	Global Environmental Monitoring System (UNEP)
GEMS/WATER	Global Water Quality Monitoring Programme
GESAMP	Joint Group of Experts on the Scientific Aspects of Marine Pollution
GIPME	Global Investigation of Pollution in Marine Environment (UNESCO)
GIS	Geographical Information System
GLOBE	Global Legislators Organisation for a Balanced Environment
GOS	Global Observing System (WMO/WWW)
GRID	Global Resource Information Database
GSP	Generalized system of preferences
HIV	Human immunodeficiency virus
IAEA	International Atomic Energy Agency
IAP-WASAD	International Action Programme on Water and Sustainable Agricultural Development
IARC	International Agency for Research on Cancer
IBSRAM	International Board of Soil Resources and Management
ICCA	International Council of Chemical Associations
ICES	International Council for the Exploration of the Sea
ICPIC	International Cleaner Production Information Clearing House
ICSC	International Civil Service Commission
ICSU	International Council of Scientific Unions
IEEA	Integrated environmental and economic accounting
IFAD	International Fund for Agricultural Development
IGADD	Intergovernmental Authority for Drought and Development
IGBP	International Geosphere-Biosphere Programme (ICSU)
IGBP/START	International Geosphere-Biosphere Programme/Global Change System for Analysis, Research and Training
ILO	International Labour Organisation
IMF	International Monetary Fund
IMO	International Maritime Organization
INFOTERRA	International Environment Information system (UNEP)
IOC	Intergovernmental Oceanographic Commission
IPCC	Intergovernmental Panel on Climate Change
IPCS	International Programme on Chemical Safety
IPM	Integrated pest management
IRPTC	International Register of Potentially Toxic Chemicals
ITC	International Tin Council
ITTO	International Tropical Timber Organization

ACRONYMS (Cont'd)

IUCN	International Union for Conservation of Nature and Natural Resources
MARPOL	International Convention for the Prevention of Pollution from Ships
OECD	Organization for Economic Cooperation and Development
PGRFA	Plant genetic resources for agriculture
PIC	Prior informed consent procedure
SADCC	South African Development Co-ordination Conference
SARD	Sustainable agriculture and rural development
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNDRO	Office of the United Nations Disaster Relief Coordinator
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organization
UNU	United Nations University
WCP	World Climate Programme (WMO/UNEP/ICSU/UNESCO)
WFC	World Food Council
WHO	World Health Organization
WMO	World Meteorological Organization
WWF	World Wide Fund for Nature (also called World Wildlife Fund)
WWW	World Weather Watch (WMO)

ABBREVIATIONS

ADB	African Development Bank
AIDS	Acquired Immunity Deficiency Syndrome
AMCEN	African Ministerial Conference on the Environment
Ang	Angola (on Tables in text)
Bot	Botswana (on Tables in text)
CIDA	Canadian International Development Agency
COMESA	Community of Eastern and Southern African States
DAC	OECD Development Assistance Committee
EAC	East African Community
ELMS	SADC Environment and Land Management Sector Coordination Unit
EU	European Union
GDP	Gross Domestic Product
GNP	Gross National Product
GTZ	German Agency for Technical Assistance
ICAO	International Civil Aviation Organization
IFC	International Finance Corporation
IIED	International Institute for Environment and Development
Les	Lesotho (on Tables in text)
Mal	Malawi on (Tables in text)
Moz	Mozambique (on Tables in text)
Nam	Namibia (on Tables in text)
NATCAP	National Technical Cooperation and Assistance Programme
NCS	National Conservation Strategy
NEAP	National Environmental Action Plan
NEPRU	Namibian Economic Policy Research Union
NGO	Non-Governmental Organization
NORAD	Norwegian Agency for Development Cooperation
OUA	Organization of African Unity
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
PTA	Preferential Trade Area for Eastern and Southern Africa
RSA	Republic of South Africa (on Tables in text)

ABBREVIATIONS (Cont.)

SACCAR	Southern African Centre for Cooperation in Agricultural Research
SACU	Southern Africa Customs Union
SADC	Southern African Development Community
SAP	Structural Adjustment Programme
SARCCUS	Southern African Regional Commission for the Conservation and Utilization of Soil
SARD	Southern African Research and Documentation Centre
SASREG	Southern African Sub-Regional Environment Group
SATCC	Southern African Transport and Communications Commission
SIDA	Swedish International Development Authority
Swa	Swaziland (on Tables in text)
Tan	Tanzania (on Tables in text)
UN	United Nations
UNCED	United Nations Conference on Trade and Development
UNCSD	United Nations Commission for Sustainable Development
UNHCR	United Nations High Commissioner for Refugees
UNIFEM	United Nations Development Fund for Women
USAID	U.S. Agency for International Development
WCED	World Commission on Environment and Development
WFP	World Food Programme
WB/IBRD	International Bank for Reconstruction and Development
WRI	World Resources Institute
ZACPLAN	Zambezi River System Action Plan
Zam	Zambia (on Tables in text)
Zim	Zimbabwe (on Tables in text)

Abbreviations in the Tables

%	= per cent
agric	= agriculture
av	= average
env	= environment/environmental
equ	= equivalent
esp	= especially
est	= estimated
gm	= gram
ha	= hectare
Kg	= kilogram
Km	= kilometers
mth	= month
per cap	= per capita
pop	= population
R&D	= Research & Development
sq. Km	= square kilometers
yr	= year

Notes on the Tables

Monetary figures are in US dollars
Figures in *italics* are for years other than those specified
Three periods (...) indicate no comparable data was available
The 0 and 0.0 mean zero or less than half the unit of measure
The SADC columns include the total or average for all countries with reported data

EXECUTIVE SUMMARY

SADC Policy and Strategy for Environment and Sustainable Development
Toward Equity-Led Growth and Sustainable Development in Southern Africa

"We must not forget the majority of people and countries in the SADC Region and the world are poor. If the poor sometimes behave in a way that degrades the environment it is not because they chose to do so. They only do so when they have no other choices... The Earth Summit and Agenda 21 must expand the development choices and opportunities for the majority of poor people, communities and countries... The Earth Summit and Agenda 21 must provide a new basis for a newdeal for the majority of poor people and countries in order to secure and sustain our common future".

Sustaining Our Common Future, page 32
SADCC Report to the 1992 Earth Summit.

New Challenges and Opportunities in Southern Africa

After a decade of largely unsustainable development in southern Africa the livelihoods and lives of many people and the economic prospects of most countries continue to be threatened by environmental degradation. Most SADC countries now face a formidable series of critical demographic, social, economic, agricultural, energy, technological, and institutional transitions in order to move toward development that is economically, socially, and environmentally sustainable.

However, the commitment to build a new Southern African Development Community (SADC) plus the membership of the new majority-led South Africa provide a new basis and more opportunities for the SADC countries to better manage their multiple transitions and together move toward sustainable development.

Agenda 21, the global action plan for environment and development adopted at the 1992 Earth Summit, provides a new integrated policy framework for national and regional action for moving toward sustainable development within and among SADC countries.

Implementing Agenda 21 in the SADC Region

In the SADC region as elsewhere, unsustainable development has been and remains largely driven by economic and sectoral policies which are too narrowly conceived and focused and particularly neglect the adverse impacts on the poor majority and the environment. Conventional "react-and-cure" responses simply cannot keep up with the escalating pace and scale of environmental degradation. Moreover, none of the national environmental and resource management agencies in the SADC region have enough staff or funds to address all of the problems effectively.

To break away from unsustainable to sustainable development in the SADC region, environmental concerns need to be increasingly incorporated as an integral part of the development policies and decision-making of the major economic and sectoral Ministries. Agenda 21 contains many recommendations for integrating environment and development in all major sectors, and proposes a broad range and mix of regulatory measures and economic incentives to ensure that national development becomes ecologically and economically sustainable.

Agenda 21 sets 38 main policy goals to be tackled through 131 priority programmes with a combined total of over 2,500 recommendations for national and international action. Part 2 and Annex 2 of this report contains a summary of some of the most relevant Agenda 21 goals, priority programmes and recommendations for action for some key SADC policy sectors.

Some of the key policy issues and goals in Agenda 21 are not explicitly reflected in the present SADC structure. While the mandates of several SADC sector groups could be extended to cover some of the missing key issues (e.g. biodiversity), new SADC institutional arrangements need to be considered for other key issues such as health and human settlements.

Moving Beyond Agenda 21 in the SADC Region

Agenda 21 unfortunately does not provide "a new basis for a new deal for the majority of poor people and countries". Alleviating the poverty of the 128 million people in the region remains the overriding goal and priority. A third crucial element must be added to "environment and development" to make Agenda 21 more applicable and operational in the SADC region. The critical missing link is equality.

Throughout the SADC region the poverty of the poor majority remains the main cause and consequence of environmental degradation which in turn undermines the possibilities for future economic growth. But the poor are not the problem The National development and international aid policies which fail to reach, involve and benefit the poor majority are the problem. As presented in part 3 of the report, policy changes to achieve greater equity for sustainable development are needed in national economic, agricultural, land tenure, human settlements, and health policies as well as even wildlife and park policies. Significant changes are also needed in the international trade, aid and leading policies of developed countries and multilateral financial institutions.

Equity-led growth for sustainable development

The crucial starting point for sustainable development is *equity-led growth* within and among SADC countries. Growth strategies which fail to improve the lives and livelihoods of the poor majority are not socially or politically sustainable. Growth strategies which degrade the environment and resources base needed for future development are not ecologically o even economically sustainable. Growth strategies which are not economically, socially, and environmentally sustainable, however spectacular the short term results may be, are not and should not be called development.

Accelerated economic growth is nevertheless needed throughout the SADC region. Without growth, greater equity will be difficult to achieve as there will be few or no benefits to share. Without growth, poverty-driven environmental degradation will continue to escalate. Without growth there will be no additional financial resources for tackling the already large backlog of environmental degradation.

Economic growth is not at issue. At issue is the kind and content of that growth. Future growth in the SADC region must become more equitable, less polluting and more efficient in the use of energy and natural resources. National and international equity-led growth strategies are needed for sustainable development to provide "a new basis for a new deal for the majority of poor people and countries in order to secure and sustain our common future."

New goals and agenda for sustainable development

Equity-led growth strategies which put and keep the focus of development on the poor majority of people and countries are needed to accelerate the tradition toward sustainable development in the SADC region. By shifting the focus to people rather than projects, equity-led growth shares many of the goals and attributes of the sustainable *human* development approach pioneered by UNDP as development *for* the people and *by* the people. The three overall goals for sustainable development in the SADC region are:

- To accelerate economic growth with greater equity and self-reliance;
- To improve the health, income and living conditions of the poor majority;
- To ensure equitable and sustainable use of the environment and natural resources for the benefit of present and future generations.

These three goals constitute *one agenda for action*. None are achievable without the other two. However, these goals are not achievable without significant changes in international trade and debt policies. Without more equitable international economic arrangements, most developing countries in and outside the SADC region have limited scope and little hope for achieving economic, social and environmental sustainability.

Integrating EIA^3 in decision-making

Throughout the SADC region the largely separate policies and programmes for economic reform, social progress and environmental improvement must be increasingly integrated in *a single agenda and strategy* for sustainable development. The new agenda needs to be anchored and reinforced by incorporating impact assessments as an integral part of decision- making in at least three key respects:

- Assessing the likely *environmental impacts* of economic policies and activities;
- Assessing the likely *economic impacts* of environmental policies and measures;
- Assessing the likely *equity impacts* of both economic and environmental policies.

Although the integration in all key policy sectors of economic, environmental and equity impact assessments (EIA^3) will not make decision-making easier, it will improve the chances of making better decisions by compelling decision-makers to assess and defend their choices in terms of economic, social and environmental sustainability.

Although there are few absolutes in public policy, at least one should prevail in the SADC region. If an EIA^3 review of a proposed policy or programme indicates that it will not lead to at least some improvement in the living conditions and prospects of the poor majority, then a sustainable alternative must be found that does.

A New SADC Policy and Strategy for Environment and Sustainable Development

Over the last decade the ELMS programme gradually expanded on a incremental basis without a comprehensive SADC policy or integrated strategic framework. A new regional policy and strategy for environmental management and sustainable development is now both necessary and timely. However, a new SADC policy and strategy for environment and resource management cannot be separate. *The new SADC policy must be developed and implemented as an integral part of a larger SADC agenda and strategy for equity-led growth and sustainable development in and among the countries of the SADC region.*

Main environmental policy goals and issues

The main goals for a regional environment policy and strategy are:

* To protect and improve health, environment and livelihoods of the people in souther Africa with priority to the poor majority;
* To preserve the natural heritage, biodiversity and life supporting ecosystems in southern Africa;
* To support regional economic development on an equitable and sustainable basis for the benefit of present and future generations.

Three complementary but more functional goals are:

* To strengthen the analytical, decision-making, legal, institutional and technological capacities for achieving sustainable development in southern Africa;
* To increase public information, education and participation on environment and development issues in southern Africa;
* To expand regional integration and global cooperation on environmental and natural resources management for sustainable development.

The key policy issues, objectives and programme areas for an indicative SADC Environment and Sustainable Development Programme are summarized in Table 4.1. It contains over 20 key programme areas to be coordinated by ELMS directly as the led agency plus more than 20 others to be coordinated by other SADC units. ELMS would have the lead responsibility for coordinating the overall programme. To complement and reinforce the larger SADC goals and agenda for equity-led growth and sustainable development, assessments of the economic, environmental and equity impacts (EIA^3) would be carried out before and during the implementation of any major activities in the programme.

Strategic priorities for action

The key programme areas and activities in the SADC Environment and Sustainable Development Programme are presented in Table 4.2 according to five strategic categories.

* Assessing environmental conditions, trends and progress made and needed for sustainable development
* Reducing significant threats to human health, ecosystems and future development
* Breaking away from unsustainable to sustainable development for the benefit of present and future generations
* Managing shared natural resources on an equitable and sustainable basis
* Accelerating regional integration and capacity building for sustainable development

Strengthening Regional Integration and Institutions

A significant strengthening of existing institutional arrangements will be required to carry out the new SADC Environment and Sustainable Development Programme.

(a) Committee of Ministers of Environment: A SADC Committee of Ministers of Environment should be established. This Committee would meet at least once a year to discuss key environmental policy issues and to assess progress made and needed in implementing the programme; and would report directly to the SADC Council of Ministers.

(b) Technical Committees: There should be three ELMS technical committees - for Land Management, Environment Management and Water Resources Management - whose main functions would include the review and approval of regional policies, plans, priorities and project workplans as well as the monitoring and assessment of the progress made and needed in implementing the programme. The Technical committees would meet at least once a year, and report to the Committee of Ministers of Environment.

(c) SADC-ELMS Coordination Unit: The Coordination Unit should be strengthened to coordinate the formulation and implementation of regional environment policies and strategies, and the Environment and Sustainable Development Programme. As anticipated in the SADC Treaty, the regional programme staff should become fully international in status and character.

(d) Intersectoral coordination and cooperation: Coordination and cooperation among the different SADC sectors and policy areas need to be strengthened by creating, for example, special inter-Ministerial task forces in member countries. At the regional level, intersectoral cooperation and implementation must increasingly become the rule rather than the exception, especially in the Environment and Sustainable Development Programme.

(e) Use of experts and consultants: Experts from the SADC region should be used whenever possible and paid competitive rates. Foreign experts should not be used unless a clear case is made that the necessary expertise is unavailable in the SADC region. A regional environment training strategy should be prepared as a top priority, including a 10-year plan for building a regional network of specialized training centres.

(f) Participation of the business community and NGOs: Experts and representatives from the business community and relevant NGOs should be invited to participate in all meetings, including intergovernmental meetings though without the right to vote. They should also be involved in the planning and implementation of projects where they have special expertise.

Investing in Our Shared Future

As the only significant increase in development aid will likely be in the number of new conditions put on it, SADC countries need to set and increasingly finance their own priority programmes for environmental management and sustainable development in the region.

However, the reallocation of financial or staff resources from national to regional programmes can only be justified if there are clear net benefits for the contributing countries. Regional projects should be adopted only if they serve the mutual interests and yield net benefits for the participating countries. Funding for the SADC Environment and Sustainable Development Programme should include the following measures:

* Programme workplans and budgets should increasingly be based on the availability of local resources from SADC members through, for example, assessed contributions, voluntary contributions, staff secondments and services-in-kind.
* Other funding options include cost-recovery or basic user charges for particular regional services, special regional levis on benefits derived from regional programmes and new regional funding mechanisms for special regional projects.
* Although external aid is needed to launch the new programme, SADC members should finance at least the core staff and programme support costs of the regional secretariat. External funds should be used largely to accelerate implementation so that local resources can be released and redirected to other priority issues.

The inevitably rising financial contributions by SADC members should be regarded not as subsidies but as investments in an increasingly integrated development community. A SADC investment plan should be prepared for gradually replacing external aid with local funds. Within a decade the SADC Environment and Sustainable Development Programme should be a truly independent, regionally interdependent and locally financed programme.

The abbreviation of "SoutHern AfRican Environment and Sustainable Development Programme" as the "**SHARED Programme**" underlines the shred responsibility and commitment of SADC countries to share information and expertise on shared environmental problems and natural resources for achieving sustainable development and securing their future.

PART I

The New SADC:
Challenges and Opportunities

1. The Multiple Challenges in SADC Countries

After several decades of often marginal economic growth, increasing poverty and escalating environmental degradation, SADC countries face a formidable series of critical transitions in order to move from largely unsustainable development toard development that is economically,socially and environmentally sustainable. Critical transitions include:

A *demographic transition* toward an optimal size and distribution of population and economic activity in relation to the environment and natural resource base;

A *social transition* toward a more equitable sharing of development opportunities and benefits with priority to the poor majority;

A *gender transition* toward expanded rights and participation of women in the development process;

An *economic transition* toward equity-led growth with priority to the poor and to protecting the environment and natural resources needed for future development;

An *agricultural transition* toward better and sustainable use of land for greater food production and productivity with priority to household and regional food security;

An *energy transition* toward more efficient use of and less polluting sources of energy with priority to the accelerated development of renewable sources and affordable alternatives to fuelwood for the poor majority;

A *technological transition* toward accelerated industrial development with priority to technologies that produce less waste and are more energy and resources efficient;

An *institutional transition* toward new national and regional institutional arrangements with priority to integrating economic, equity and environmental imperatives in planning and decision-making within and among different Ministries and countries;

A *governance transition* toward greater public accountability and participation with priority to new sustainable development partnerships among governments, industry and NGOs;

A *capacity building transition* toward greater public accountability and participation with priority to accelerated development and use of local know how, technology and expertise;

A *development budget transition* from aid dependence to self reliance;

A *peace and security transition* after decades of conflict toward a new era of regional cooperation and integration with priority to the peaceful settlement of disputes and equity-led growth for sustainable development.

Each of these transitions share at least four characteristics:

* All are interrelated. None of the transitions can be achieved in isolation.
* All are crucial for moving toward development that is economically, socially and environmentally sustainable.

Key Economic, Social and Environmental Indicators

Economic Indicators	Year	Ang	Bot	Les	Mal	Moz	Nam	RSA	Swa	Tan	Zam	Zim	SADC	Africa
GNP ($ billions)	91	...	3.3	1.1	2.4	1.2	2.2	*114.4*	0.8	2.8	3.4	6.9	138.5	260.0
GNP ($ per capita)	81	...	1,010	540	200	...	...	2,770	760	280	600	870	880	...
GNP ($ per capita)	91	...	2,580	570	230	80	1,520	*2,880*	1,130	120	420	670	1,020	540
GNP growth (% av/yr)	80/91	...	9.3	2.7	3.5	-1.1	1.6	*1.3*	6.8	2.0	0.7	3.6	3.0	2.6
GDP ($ millions)	81	...	1,010	*320*	*1,420*	...	...	74,670	760	*4,350*	3,430	6,010	11,496	...
GDP ($ millions)	91	...	3,600	600	2,000	1,200	2,000	*117,500*	...	2,200	3,800	5,500	138,400	230,000
Agriculture (% GDP)	91	...	5	14	35	64	10	5	...	61	16	19	25	21
Industry (% GDP)	91	...	54	38	20	15	28	*46*	...	5	47	32	32	34
Services (% GDP)	91	...	41	48	45	21	62	*49*	...	34	37	49	43	45
Bilateral aid (% millions)	92	322	113	142	521	1,393	140	...	49	1,344	1,016	735	5,775	18,080
Bilateral aid (% GNP)	92	...	3.4	13.3	22.1	115.6	6.2	...	5.9	48.2	29.9	10.7	28.5	10.4
Bilateral aid (per capita)	92	32	86	77	51	92	91	...	62	48	118	69	73	35
External debt ($ millions)	81	...	...	107	685	...	...	...	...	1,476	2,229	880	...	...
External debt ($ millions)	91	...	500	400	1,700	4,700	...	*16,700*	...	6,500	7,300	3,400	41,200	152,000

External debt (% GNP)	81	...	...	15	42	...	...		...	29	73	19	...	...
External debt (% GNP)	91	...	16	39	79	426	...	14	...	251	...	57	126	101
Debt service ratio (% exports)	81	...	...	3	25	...	...	...	...	7	24	4	...	...
Debt service ratio (% exports)	91	...	3	5	25	11	...	7.1	...	25	51	27	22	26
Military expenditure (% GDP)	90/91	20.1	2.5	2.4	1.5	13.0	2.2	2.7	1.4	6.9	3.2	9.1	5.9	3.0
Social Indicators	**Year**	**Ang**	**Bot**	**Les**	**Mal**	**Moz**	**Nam**	**RSA**	**Saw**	**Tan**	**Zam**	**Zim**	**SADC**	**Africa**
Population (millions)	81	7.8	0.9	1.4	6.2	12.5	...	29.5	0.6	19.1	5.8	7.2	91.0	...
Population (millions)	92	9.9	1.3	1.8	10.3	15.1	1.5	39.9	0.8	27.9	8.6	10.6	127.7	560.0
Population (millions)	2000	13.1	1.7	2.2	12.6	19.4	2.0	47.9	1.0	35.9	10.7	13.2	159.7	710.0
Pop. growth (% av/yr)	92/2000	3.5	2.9	2.5	2.6	3.2	3.1	2.3	2.7	3.2	2.7	3.2	2.9	3.4
Urban population (% total pop.)	92	27	27	21	12	30	29	51	28	22	42	30	32	29
Urban population (% total pop.)	2000	36	43	28	16	41	35	66	46	47	59	33	41	38
Urban population growth (% av/yr)	92/2000	5.4	7.9	6.3	6.5	7.2	5.4	3.2	6.7	7.5	5.5	4.5	6.0	5.6
Absolute poverty (millions)	92	4.7	0.6	1.0	8.4	8.9	...	...	0.4	16.2	5.5	4.4	50.1	...
Access to health care (% population)	85/91	30	89	80	80	39	70	...	55	80	74	83	68	59

Access to safe water (% population)	85/91	34	60	48	53	24	52	*20*	35	51	48	36	42	45
Access to sanitation (% population)	88/91	18	42	25	...	24	15	*33*	40	66	43	42	35	31
Life expectancy at birth (yrs)	81	42	57	52	44	...	...	63	54	52	51	55	52	...
Life expectancy at birth (yrs)	92	46	61	60	45	47	58	*65*	58	51	46	56	54	51
Maternal deaths (100,000 live births)	88	900	300	350	500	800	400	250	400	600	600	330	490	700
Infant deaths (100,000 live births)	92	126	61	80	143	148	71	53	74	103	84	59	91	101
Malnourished kids under 5 yrs (000's)	92	641	57	48	466	1,195	75	...	11	1,220	419	252	4,384	...
Daily calories (% requirements)	80	83	...	107	94	70	...	118	...	83	93	86	90	...
Daily calories (% requirements)	88/90	80	100	93	87	77	...	128	105	91	87	94	94	92
Adult literacy (% pop.)	80	...	*35*	52	*25*	33	...	...	*65*	79	44	*69*	50	...
Adult literacy (% pop.)	92	43	75	*78*	45	34	*40*	*70*	*71*	*55*	79	69	60	51
Education budget (%GNP)	90	...	8.4	3.8	3.4	6.3	4.7	...	6.4	5.8	2.9	10.6	5.8	4.6
Health budget (%GDP)	90	1.8	3.2	1.2	2.9	4.4	5.0	3.2	5.8	3.2	2.2	3.2	3.3	2.5
Environment Indicators	**Year**	**Ang**	**Bot**	**Les**	**Mal**	**Moz**	**Nam**	**RSA**	**Swa**	**Tan**	**Zam**	**Zim**	**SADC**	**Africa**
Land area (000 Km^3)	...	1,250	582	30	118	802	824	1,219	17	945	753	391	6,931	24,300
Population density (km^2)	92	8	2	61	87	19	2	33	47	30	11	27	30	22
Arable land (% total land)	87/90	2.4	2.4	10.5	25.3	3.7	0.8	10.1	9.3	4.7	7.1	7.0	7.6	6.2

Forest area (% total land)	87/90	43	19	66	40	18	22	4	6	46	39	50	32	29
Fuelwood production (% change)	79/90	31	42	32	37	33	...	...	10	44	44	31	34	34
Water (000 m^3 per capita)	92	16.0	0.8	2.2	0.9	3.9	5.9	1.3	8.8	2.7	11.1	1.9	5.1	7.2
Water use (000m^3 per c.)	87	57	100	31	20	55	104	386	417	35	86	136	130	120
Water: Domestic use (%)	87	14	5	22	34	24	6	12	5	21	63	14	21	7
Water: Industrial use (%)	87	10	10	22	17	10	12	36	2	5	11	7	12	5
Water: Agricultural use (%)	87	76	85	56	49	66	82	52	93	74	26	79	67	88
Protected areas (number)	93	5	9	1	9	1	11	235	4	28	20	25	348	704
Protected areas (000 hectares)	93	2,641	10,225	7	1,059	2	10,371	7,413	46	13,000	6,361	3,068	54,193	138,893
Protected areas (% total land)	93	2.1	17.6	0.2	8.9	0.0	12.6	6.1	2.6	13.8	8.5	7.9	7.3	4.6

Notes: "Africa" refers to Sub-Sahara Africa. Bold figures are from the 1983 *World Development Report*. The concluding entries on water and protected areas (IUCN categories I-V) are from the *World Resources Report 1994-95*. All other figures are from the *Human Development Report 1994* except for the italised figures in the column from South Africa: those figures are for 1993 and were provided by their Department of Environmental Affairs and Tourism. Other figures in italics are for years other than those indicated. The dots (...) indicate data not available.

* The common priority is to improve the health, lives and livelihoods of the poor majority.

* The pace and scale of change as well as the opportunities for success will be far greater with expanded regional cooperation and integration.

2. From Coordination to Integration

The new SADC provides a new basis and more opportunities for member countries to better manage their multiple transitions and together move toward sustainable development both nationally and regionally. For virtually every sector, and especially for environment and natural resources management, the new SADC is both timely and necessary. A recent major study on "Economic Integration in Southern Africa" bluntly concluded that "regional cooperation is not an optional extra; it is a matter of survival." (ADB, 1993).

The commitment by Heads of State and Government at their 1992 Summit to move from regional coordination (SADCC) to integration and a new Southern African Development Community (SADC) included the adoption of new principles and goals directly related to many central issues for the different but interrelated transitions. The guiding principles in the 1992 SADC Treaty include such crucial prerequisites for sustainable development as "solidarity, peace and security"; "human rights, democracy and the rule of law"; "equity, balance and mutual benefit"; and the "peaceful settlement of disputes". Relevant objectives in the SADC Treaty include:

". . . to achieve *development and economic growth, alleviate poverty, enhance the standard and quality of life* of the peoples of Southern Africa and support the *socially disadvantaged* through regional integration";

"... to promote and defend peace *and security*";

"... to promote *self-sustaining development*";

"... *to achieve sustainable utilization of natural resources and effective protection of the environment*";

". . . to encourage *the peoples of the Region to take initiatives to develop economic, social and cultural ties and participate fully* in the implementation of SADC programmes and projects";

"... to create appropriate institutions and mechanisms for *the mobilization of requisite resources* for the implementation of the programmes and operations of SADC";

"... to promote the *development of human resources*";

"... to promote the *development, transfer and mastery of technology*";

". . . to improve *economic management and performance* through regional cooperation".

The 1992 SADC Treaty commitment to integration and a new regional community also reflects the cultural and environmental realities that many peoples as well as wildlife, natural resources and ecological zones have always transcended national boundaries in the region. The Zambezi River, for example, is a life-supporting umbilical cord linking eight SADC countries. The regional management and sustainable use of shared resources represent a major challenge and opportunity for the new SADC.

3. Building on Success

During the 1980's the SADC countries established the best record in Africa for regional cooperation on economic and environmental issues. SADC's decentralized network of regional coordinating units for key policy areas is unparalleled in Africa and elsewhere. In other regions the concentration of the decision-making and management capacity in one or a few countries makes their regional institutions seem distant and aloof for many people.

In SADC, every member country hosts one or more regional units, usually for key policy areas where they have a special concern and competence. As a result the regional staff live and work closer to the people they serve and to the problems they must resolve. Every country has a direct stake and share in regional institutions. For host countries it often becomes a matter of some national pride to ensure 'their' regional programmes succeed.

The countries of Southen Africa have or share many other stregths on which to build the new SADC. Two countries, Botswana and South Africa, have the highest GNP per capita in Africa. Half the SADC members had higher GDP growth during the 1980's than most other African countries. Other key indicators of improved health and social progress in the region such as life expectancy at birth are higher than the average in Africa.

Notable achievements include the setting up regional research and training institutions and networks on sustainable land use and agricultural production. For example, the Southern African Centre for Cooperation in Agricultural Research and Training (SACCAR) links and supports over 20 specialized national and regional research institutes on key crops (e.g. sorghum, millet, groundnut), agroforestry and plant genetic resources generally. The Southern African Regional Commission for the Conservation and Utilization of the Soil (SARCCUS) has facilitated the regional exchange of agriculture-related technical and scientific information, expertise and know-how for over 20 years.

Concerned countries have also prepared and started implementing joint regional programmes for managing shared natural resources such as water (e.g. the Zambezi Action Plan) and for tackling major threats such as desertification (e.g. the Kalahari-Namib Action Plan).

Since the 1992 Earth Summit many SADC members prepared new national plans and strategies for conservation, environmental improvement and Agenda 21 follow-up (see Table 1.2). All SADC countries already have environment Ministries or special boards to take and guide national action.

Internationally, SADC members took an active part in preparing the regional Annex for Africa to the global Convention on Desertification and the African Common Position for the Biodiversity Convention. SADC members also play a leading role in the work of the African Ministerial Conference on Environment (AMCEN). The Environment Ministers from Zimbabwe and Botswana are the current Chairman and Vice-Chairman of AMCEN.

The commitment to regional integration presents new opportunities for transforming some existing weaknesses into strengths, especially on the sustainable use of natural resources. For example, national food security remains a top priority in all SADC countries. Yet the previously justified preoccupation with national food security has also been a source of environmental degradation in many countries by stimulating agricultural expansion into marginal areas with vulnerable soils as well as the over exploitation or inappropriate use of limited arable land for strategically important crops.

Some of these problems can be reduced or avoided by refocussing national strategies on *regional* and *household* food security. At the outset of the transition toward regional food security many countries will be understandably reluctant to become dependent on others for strategically important crops. For this and other reasons it is politically necessary as well as mutually beneficial to *simultaneously* expand regional integration in other areas of strategic national importance such as energy, water resources and trade. The SADC countries are already ecologically interdependent. To accelerate their transition toward sustainable development it is in their mutual self-interests to become more economically interdependent and regionally independent.

Although several major policy areas must still be added, the existing institutional network and regional programmes already provide a solid foundation on which to build the new SADC. Key areas of public policy and concern which need to be added include human health, waste management, technological research and development, air and noise pollution (especially transboundary air pollution), and the management of demographic change, particularly human settlements planning, water supply and sanitation.

The 1992 SADC Treaty recognizes the need for new institutions. Several studies and a series of community building workshops have already been launched. The recent membership of South Africa provides further reason and an opportunity to reassess and strengthen the present SADC institutional framework.

Table 1.2
Environmental Policies and Strategies in SADC Countries

Some categories, though unmarked, are often covered under other more comprehensive policies and strategies (e.g. a National Conservation Strategy or National Environment Action Plan often covers biodiversity, parks, wildlife, forests, minerals, etc.).
Year = Date adopted **A** = Adopted but date unknown **D** = Being drafted or updated

Policies and Strategies	Ang	Bot	Les	Mal	Moz	Nam	RSA	Swa	Tan	Zam	Zim
01 Biodiversity	...	D	...	...	D	94	D	...	93	A	A
02 Coastal/Marine Resources	...	...	...	...	D	92	...	...	...	...	...
03 Drought/Desertification	...	A	...	...	...	94	...	...	92	...	A
04 Energy	...	84	90	...	D	D	D	D	92	94	93
05 Environmental Education	...	90	...	...	...	D	89	A	...	...	...
06 E.I.A.	...	...	...	...	D	94	...	D	...	D	93
07 Fisheries	...	91	...	...	93	94	...	...	...	...	...
08 Food Security	...	91	93	...	...	D	...	D	A	A	...
09 Forests	...	91	91	...	...	93	...	...	A	80	82
10 Land/Soils	...	91	76	...	...	D	...	D	A	...	81
11 Minerals	...	...	...	...	...	93	D	...	A	...	81
12 National Conservation Strategy	...	90	...	...	...	94	D	...	D	85	87
13 National Development Plan	...	91	A	...	93	D	...	D	94	91	91
14 National Environment Action Plan	...	...	88	A	94	94	D	D	D	94	D
15 National Green Plan/Agenda 21	...	...	D	...	...	92	...	...	...	...	92
16 Protected Areas/Parks	...	93	81	...	...	93	D	...	D	...	75
17 Sanitation	...	...	...	...	...	94	D	...	...	94	92
18 Tourism	...	70	...	...	D	94	...	D	93	D	A
19 Toxic Wastes	...	...	...	...	D	D	D	...	...	...	81
20 Transportation	...	...	...	...	...	D	...	...	...	...	A
21 Urban Development	...	...	A	...	88	94	...	...	A	...	A
22 Waste Management	...	...	...	...	D	D	D	D	...	D	A
23 Water Resources	...	...	D	94	...	93	86	D	D	94	A
24 Wetlands	...	93	...	...	...	94	94	...	D	D	93
25 Wildlife	...	86	...	...	...	D	...	...	A	80	...

Sources: 1994 SADC/ELMS Questionnaire and information provided during the ELMS missions. This chart will be updated as new information becomes available.

4. Accelerating Growth with Greater Equity

Accelerating economic growth and development is needed throughout the SADC region. For example, on a GNP per capita basis two SADC members are ranked lowest in the world. Eight of the eleven SADC members are among the 40 least developed countries in the world. In the early 1990's SADC countries received on average at least twice as much bilateral aid on a per capita basis and as a percentage of GNP than most African countries.

Even in areas where SADC countries have largely performed better than most other African countries, that is still not good enough especially if one is among those without reasonable access to safe water, sanitation or health services. As the poor majority of people generally suffer first and most, the lack of adequate growth is politically unsustainable.

These are only some of the many compelling reasons why renewed economic growth is imperative throughout the region. But renewed efforts on environmental protection and improvement are also imperative. When other arguments fail in the still persistent environment *versus* development debate, environmentalists are frequently accused of being anti-growth. But economic growth itself is not really the issue. What is at issue is the kind and content of that growth.

The top priority is to ensure the opportunities and benefits of economic growth are distributed more equitably, with the larger share to the poor majority and especially the women and children who are the majority in the poor majority. Without economic growth, however, there will be few benefits to share. Without equity-led growth, poverty and the associated environmental degradation will increase. As stated in the most current and comprehensive report on the "State of the Environment in Southern Africa":

> While economic growth is necessary to improve incomes, it is also critical that poverty be alleviated; in other words, fairer distribution of wealth is also needed. Unless poverty is reduced, population growth and pressures on resources will continue to increase.... (p.6)

The poor majority are *at least* the majority in the SADC region. Nearly half or more of the people in the region are not just poor but are *absolutely* poor. While the analysis did not include the two poorest countries in the region and world, the same report points out that:

> Information on numbers of people in *absolute* poverty (those unable to meet essential needs) is difficult to get but statistics are available for Botswana, Lesotho, Malawi, Namibia and South Africa. For those five countries the figures range from 49 to 78 per cent.... (p.6)

The kind and content of growth must also change. Economic growth must become more energy and resource efficient and produce less wastes and harmful pollutants. That will significantly reduce and help avoid further environmental degradation. However, after several decades of largely unsustainable development, SADC countries already face a huge backlog of environmental degradation. *Sustainable* economic growth is needed to generate the additional resources to finance the environmental restoration and improvement measures needed to tackle that backlog.

More equitable and ecologically sustainable growth is needed. Neither can be achieved without the other. In many SADC members a 'vicious cycle' is already dominant: widespread poverty is a major driving force for environmental degradation; escalating environmental degradation is a major cause of widespread poverty; and their increasingly lethal interaction jeopardizes future economic growth prospects throughout the region. The final section of the overview in the 1994 report on the "State of the Environment in Southern Africa" concludes that:

> Poverty and environmental degradation are linked in a vicious circle in which people cannot afford to take proper care of the environment. A degraded environment produces less, so people become more vulnerable. As population increases, the next generation must spread the limited resources even thinner.... (p.17)

Fuelwood is one of many examples of poverty-driven environmental degradation in the region. As repeatedly emphasized in the 1994 "State of the Environment in Southern Africa" report, the poor urban and rural majority rely almost entirely on fuelwood for cooking and heating, creating a demand and situation that is unsustainable. The fuelwood issue is critical because it is linked to so many other environmental problems. Rising fuelwood demand, for example, is a contributing cause of deforestation resulting in habitat destruction and declining biodiversity. It is also a contributing cause of land degradation and erosion which in turn leads to the siltation of rivers with adverse impacts on freshwater and coastal ecosystems as well as hydropower generation. The dependence of the poor majority on fuelwood is a significant health threat and cause of respiratory problems, especially among children. But the poor majority are *not* the problem. They cannot be blame when they have no other reasonable choices. The problem is the lack of affordable energy alternatives to fuelwood.

The regional environment and development situation must be assessed in a global context. As shown in Table 1.3, most SADC members are predominantly exporters of primary agricultural, mineral, forest and fish products. Four SADC members are among the world's most severely indebted countries which means that either of two key ratios is above critical levels: the present value of debt service to GNP (80%) or the present value of debt service to exports (220%). That crippling debt burden, combined with generally unfavorable terms of trade and declining or stagnating aid flows, meant there was a major outflow to banks, multilateral financial institutions and countries largely in Europe and North America. That situation is economically unsustainable and also a major driving force behind social and environmental unsustainability in SADC countries.

Table 1.3
SADC Economies by Income, Indebtedness and Exports

	Low Income			Middle Income	
Main Exports	**Severely Indebted**	**Moderately indebted**	**Less indebted**	**Severely indebted**	**Less indebted**
Exporter of non fuel primary products	Tanzania Zambia	Malawi	Zimbabwe	...	Botswana Namibia Swaziland
Exporter of fuels (mainly oil)	...	...	...	Angola	...
Exporter of services	...	...	Lesotho	...	...
Diversified exporter	Mozambique	...	...	...	South Africa

Note: *Severely indebted* means either of two key ratios is above critical levels: present value of debt service to GNP (80%) and present value of debt service to exports (220%). *Moderately indebted* means either of two key ratios exceeds 60% of, but does not reach, the critical levels.

Source: World Development Report 1993, pp. 326-329.

Accelerated growth with greater equity is clearly needed in the region and globally, with priority to the poorest countries for major reductions or cancellations of debts, fairer terms of trade and increased development aid by OECD countries to at least the 0.7% of GNP target set over 20 years ago and preferably to the 1% of GNP attained by some Nordic countries.

5. Managing the Environment and Resource Base

After decades of unsustainable development largely driven by increasing population, industrialization and urbanization, the lives and livelihoods of many people and communities throughout the SADC region are threatened by environmental degradation. Escalating deforestation, soil degradation, declining biological diversity and over exploitation of wild-life, fisheries and rangelands undermine the development prospects for present and future generations in many SADC countries.

In a detailed analytical review in 1993 by SADC/ELMS of major national plans and studies such as national conservation strategies and country reports to the 1992 Earth Summit (SADC, 1993b, pp.21-45), the following key environmental issues were cited as priority concerns by five of more SADC countries:

* Population growth pressures on the resource base
* Rangeland degradation
* Soil erosion
* Water and air pollution, especially from agrochemicals
* Deforestation
* Declining biodiversity

In the 1993 review the following national priorities for environmental action were also cited by five of more SADC countries:

* Expand education on rangeland management, forestry and biodiversity
* Strengthen water resources planning and management
* Establish databases on biodiversity
* Increase afforestation, fuelwood plantations and tree planting programmes
* Strengthen pollution control standards and measures
* Improve rangeland management

A recurring concern throughout the SADC region is the need for more and better state of the environment monitoring, information and reporting. The first comprehensive regional study is the 1994 "State of the Environment in Southern Africa" done by SARDC in collaboration with the IUCN and SADC. It includes the following concerns and priorities:

Environmental quality: "Systematic monitoring of environmental quality is lacking above a basic level of testing drinking water. Some municipalities monitor a few substances in local air and water but this is largely *ad hoc.*" (p.15)

Industrial pollution: "Surveys of industrialized areas of Botswana in 1991 and Zimbabwe in 1992 revealed that many firms did not know whether the waste they produced was toxic, or even what was in the waste.... the most poisonous waste often makes its way into drinking water, air and land. Legislation to prevent such pollution is often in place but governments cannot afford the personnel and analytical equipment to enforce it." (p. 15)

Food security: "... current data is insufficient to assess the land's capacity to support future growth in food production." (p.10)

Agrochemicals: "Agricultural chemical use is monitored in a few countries. Several compounds which are banned or strictly controlled for reasons of toxicity in most developed countries are freely available to the commercial and small scale farming sectors in this region as well as for household use." (p.15)

Fisheries: "There is insufficient information to assess the maximum sustainable inland and marine fishyield, a requisite for proper management, so it is not clear whether fish demand can be met from existing resources." (p.11)

In the "Regional Overview" (pp. 1-20) of the 1994 "State of the Environment in Southern Africa" report, the main findings on key issues include:

Population growth: Regional population growth averages 3% annually. At this rate the region's population will double by the year 2018. The population growth rates vary among SADC countries from 2.2% to 3.8% annually but are stable or decreasing in six of the 11 countries. The "increasing population is multiplying the effects of all environmental problems in the region." (p.1)

Urbanization: The "percentage moving to cities is higher than the birth rate in most of the region" (p.7). As shown in Table 1.1, urban population growth in the SADC region is double the overall population growth rate. A third of the people in the region live in cities already. By the year 2000 that is expected to rise to over 40%. The fastest urbanizing countries are Botswana, Mozambique and Tanzania.

Land degradation: "About 20 percent of southern African soils needs some degree of rehabilitation, and the degradation and loss of productivity is continuing. Most of the degradation is caused by overgrazing.... Poverty compounds the problem because farmers can't afford to fertilize, leading to less vigorous plant growth which leaves soil more exposed to eroding rainfall and runoff.... A 1990 FAO study showed that soil in the region is being 'mined' for its essential nutrients." (p.9)

Fisheries: "Fish protein is in high demand but projections indicate that production will have to increase by 550,000 tones by the turn of the century to meet the increasing demands of the growing population. Several marine areas such as the Angolan and Namibian coasts have suffered from overfishing and there is localized overfishing inland as well." (p.11)

Water use: "Inadequate supply of water which is needed for domestic, industrial and agricultural use, and flushing away of wastes, could be a limiting factor on development in southern Africa.... About 60 percent of the total amount of water used in the region - almost 20 cubic kilometers of water in 1993 is used for irrigation.... (p.11)

Water pollution: "Pollution from sewage is a growing problem as urbanization increases.... Agricultural pollution by farm chemicals, particularly pesticides, contaminates drinking water. Improper irrigation has made freshwater rivers salty in some areas. Industrial pollution, subject to little enforcement or monitoring, effectively decreases the amount of fresh water by making supplies unfit for use." (p.12)

Energy: "Competition for water for hydroelectric power has already created tensions in some areas and is becoming an issue for some Zambezi River states.... The southern African region has very large coal reserves.... These could provide fuel for electricity generation, although the environmental cost of mining and burning coal is high. Already this is causing localized pollution in Zimbabwe and large scale air pollution is evident in South Africa's eastern Transvaal.... Renewable energy... has received disproportionately little research and development funds.... The potential for energy conservation in the urban and industrial sectors is high but does not seem to be a significant policy focus" (p. 12-14)

Fuelwood: "... the majority of people still rely on wood, charcoal and coal for most energy needs.... per capita fuelwood consumption in the SADC region is among the highest in the world. The fuelwood demand in the region is seen as unsustainable.... Fuelwood burning contributes to deforestation and pollution.... Another serious health problem is respiratory damage caused by smoke from heating and cooking fires.... this smoke, breathed every day by a majority of southern African residents, produces serious health effects, especially among children." (pp. 12-15)

Biodiversity: "The demand for land, water, food and energy has reduced the wild plant and animal life in southern Africa.... Wildlife, including fish, has been overexploited for food and commercial gain.... commercial poaching, with its targeted species, is threatening some with extinction...." (p.14)

The two most important resources are land and water. In the SADC region only 7.6% of the land is arable. The productivity of that limited arable land, and of the less fertile and vulnerable rangelands covering 41% of the SADC region, must be protected and improved to feed the fast growing regional population. Water is needed to support that food production and for industrial and household use. Without adequate access to clean water, people and especially children get sick and die sooner and more often of dehydration or waterborne diseases than from lack of food. Agricultural production and water resources are both crucial to support regional industrial and energy development.

6. Fast-Tracking Environmental Cooperation

After citing the management of scarce water resources in a short list of key regional initiatives, the major ADB study in 1993 on "Economic Integration in Southern Africa" concluded that:

> Action can proceed in one area as fast as circumstances allow without the pace of progress necessarily depending on what happens in other areas. A 'multi-speed' approach to coordination across different sectors is entirely possible and, indeed, desirable. (p.3)

While generally applicable this conclusion certainly needs to be restated with respect to environmental management issues in the SADC region. For many key environment and development issues such as affordable options to fuelwood for the poor majority, regional and household food security, transboundary acid deposition and cleaner production technologies, a fast-track approach is needed now.

Fast-tracking regional cooperation on environmental issues in and across different sectors simultaneously is possible, desirable and, indeed, imperative. For many countries the economic and environmental costs of postponing action will likely be far greater than the costs of taking joint action. For most SADC members, any significant delays will likely mean they must later face much higher environmental damage costs and, for shared water resources and energy, lost economic opportunity costs.

> To help set and guide a fast-paced and multi-track regional agenda, there is fortunately a new and comprehensive policy framework for action. Agenda 21, the global action plan for environment and development adopted at the 1992 Earth Summit plus the associated "African Common Position on Environment and Development" (ECA, 1991b) and "African Strategies for the Implementation of Agenda 21" (ECA, 1993), provide a new framework and basis for accelerated national and regional action for moving toward sustainable development within and among the SADC countries.

PART 2

Implementing Agenda 21 in the SADC Region

All SADC countries actively participated in the negotiations before and at the 1992 United Nations Conference on Environment and Development (UNCED) and Earth Summit. All 11 SADC members produced an UNCED national report. SADC countries also contributed to a special regional report for UNCED on "Sustaining Our Common Future" (SADCC, 1991m).

At the Earth Summit the SADC members joined 156 other countries in adopting Agenda 21 which integrated environment and development issues in a new policy framework and action plan for moving toward sustainable development at the national, regional and global levels. Although remarkably comprehensive, Agenda 21 is also extraordinarily long. With a total of nearly 500 pages in three volumes (A/CONF. 151/26, Vol. 1-3), Agenda 21 sets 38 main policy goals to be tackled through 131 priority programmes with a combined total of over 2,500 recommendations for action.

Relevant highlights of Agenda 21 for SADC countries and the main SADC policy sectors are briefly presented below and in the Annex. All excerpts are from the "Agenda 21 Summary for Decision-Makers" (Munro, 1993). The excerpts briefly state the main substantive intent of each recommendation. However, for policy and decision-making purposes the detailed recommendations in the official UNCED report should be read. To facilitate this the relevant paragraph number in the official report is cited for each recommendation.

1. Integrating Environment and Development

Agenda 21 repeatedly emphasizes the crucial importance of strengthening environment and resource management policies and agencies. In some key areas there is a lack of effective policies (e.g. marine fisheries, water and sanitation in slums) or a lack of effective implementation and enforcement of existing policies (e.g. industrial pollution control, agrochemicals). Some policies also lack the public involvement and support needed for effective implementation, especially among local communities (e.g. wildlife and parks management).

However, the crucial feature of Agenda 21 is the persistent message that changes in the policies and programmes of major economic and sectoral agencies are equally and often more important for achieving sustainable development. The cumulative pressures driving unsustainable development in the SADC region include increasing population, industrialization and urbanization. As noted in the opening paragraph of this report, a series of major and simultaneous transitions are needed in a wide range of sectors and policy areas to move toward development that is economically, socially and environmentally sustainable.

Throughout Africa two of the most decisive challenges confronting governments are the interlinked problems of widespread poverty and environmental degradation. A major cause of both is policy failure. For poverty it is the failure of national development and external aid policies and programmes to reach and expand the choices of the poor majority of people. For environment it is the failure of economic, agricultural, energy, industrial and other sectoral policies to take fully into account their often adverse impacts on the environment and natural resource base needed for future development.

The most important achievement of the 1992 Earth Summit was to shift the macro-policy focus from 'environment *or* development' to environment *and* development'. In industrial countries the standard 'react-and-cure' environmental agenda of the 1970's focussed largely on pollution and resource depletion problems. However, the usually belated and predominantly 'end-of-pipe' solutions in the standard environment agenda proved both expensive and inadequate.

In the 1980's the focus gradually moved upstream with increasing emphasis on 'anticipate-and-prevent' strategies. With the Brundtland report in the late 1980's and Rio Conference in the early 1990's, the process moved fully upstream and focussed attention and action on the *real policy sources* of unsustainable development. In the SADC region as elsewhere, unsustainable development has been and remains largely driven by economic and sectoral policies which are too narrowly conceived and focussed and particularly neglect their adverse impacts on the poor majority and the environment.

Key economic and sectoral policy areas and the associated environmental problems in the SADC region are highlighted in Table 2.1. While showing in summary form some of the main links between key policy areas and major environmental concerns, Table 2.1 still does not include some of the most important issues. It does not reflect, for example, the rising and often conflicting demands for limited resources in the SADC region such as the competing agricultural, urban, industrial and hydroelectric demands on water or the competing agricultural, urban, industrial, forestry, parks and wildlife demands on land.

None of the national environment and resource management agencies in SADC countries have enough staff or funds to address all of these problems effectively. Moreover, given the general financial constraints and cutbacks in government budgets throughout the SADC region, none are likely to receive the major budget increases needed now or in the near future. The corresponding SADC regional programmes (e.g. ELMS, Wildlife, Forestry, Fisheries and Marine Resources, etc.) face similar constraints. Both the national and regional authorities are confronted by more and tougher problems yet are somehow expected to do far more with less resources in tackling simultaneously the following three major challenges:

(a) To deal with the already *large backlog of environmental damage and degradation* caused by previous unsustainable development (e.g. degraded soils, polluted water bodies, depleted fisheries, deforested watersheds, endangered habitats and species, etc.);

(b) To tackle *chronic and newly emerging problems* which pose serious threats to human health and ecosystems (e.g. waste management, desertification, hazardous chemicals, transboundary air pollution and acidification of soils, etc.);

(c) To assess and *address future threats to* human health and welfare which can only be avoided if action is taken soon (e.g. local and global climate change, declining genetic resources, etc.).

The national and regional environment programmes and agencies in the SADC region cannot cope with such an overloaded agenda. The only chance for breaking away from unsustainable to sustainable development in the SADC region is to incorporate many of the chronic, emerging and future environmental concerns as an integral part of the development policies and decision-making of the major economic and sectoral Ministries.

To support the integration of environment and development and assess progress, environmental standards and laws need to be strengthened and enforced; economic incentives need to be used more widely; and present development indicators and accounting systems need to be adapted to better measure progress made and needed t' ward sustainable development.

The relevant priority programmes in Agenda 21 contain over 80 recommendations for action in these areas. An indicative list follows. The number of the relevant paragraph in the UNCED report (A/CONF. 151/26) appears in brackets after each entry.

A. Integrate environment and development in policies, plans and management
Integrate economic, social and environmental issues in government decision-making (8.4a)
Adopt a policy framework incorporating long term and cross-sectoral approaches (8.4b)
Make development decision-makers accountable for environmental impacts (8.4e)
Assess economic, social and environmental costs and benefits of projects (8.5b)
Move from narrow sectoral approaches to cross-sectoral cooperation (8.12)

B. Provide an effective legal and regulatory framework
Review and strengthen the effectiveness of environmental laws and regulations (8.17)
Establish procedures for legal redress and remedies for environmental harm (8.18)
Ensure equal access to legal redress and remedies for environmental harm (8.18)
Improve institutional capacity for monitoring and enforcement of compliance (8.21c)
Establish regional training centres and databases on environmental law (8.26)

Table 2.1
Key Environmental and Development Issues in the SADC Region

	Land	Water	Air	Flora/Fauna	Marine
Agricultural development	Declining soil productivity Soil erosion Rangeland degradation Bush encroachment Salinization Desertification	Agrochemical pollution Siltation Water supply & shortages Salt water intrusion Salinization Flooding Drought	Micro climate change (albedo effect)	Loss of habitats & biodiversity Overexploited forest & veld products	Agrochimical pollution Loss of coastal habitats & biodiversity Coastal erosion Siltation impact on marine ecosystems & resources
Industrial development & mining	Loss of arable land Disposal of solid and hazardous wastes	Surface & groundwater pollution from chemicals Water supply & shortages	Local & regional air pollution Noise pollution Global ozone layer depletion	Loss of habitats & biodiversity to construction & pollution Illegal hunting	Marine pollution
Energy development & use	Degradation from coal mining Acidification of soils Loss of arable land to dam & power lines	Pollution from coal mines Acidification of water	Local & regional air pollution from fossil fuel use Global climate change from greenhouse gas emissions	Deforestation from rising demand for fulwood Loss of habitats & biodiversity	Oil pollution from ships
Forestry	Loss of forest cover Soil erosion	Pollution from pulp mills Siltation Flooding Lower flows from reforestation	Pollution from pulp mills Deforestation impact on local & global climate	Loss of habitats & biodiversity	Loss of coastal habitats & biodiversity Siltation of ecosystems
Fisheries	...	Wastes from fish processing	...	Overexploited fisheries	Overexploited fisheries
Tourism	Loss of arable land to parks	Pollution from lodges	...	Overuse of parks Demand for wildlife products	Marine pollution from hotels Damage to coral reefs
Transport	Loss of arable land Soil erosion	Pollution from waste oil	Air & noise pollution from vehicles	...	Oil pollution from ships
Human settlements development	Loss of arable land Disposal of municipal garbage	Garbage & sewage pollution Lack of clean water & sanitation, esp. in slums Water supply & shortages	Air & noise pollution Pollution from domestic use of coal & fuelwood	Loss of habitats & biodiversity	Loss of coastal habitats & biodiversity Coastal erosion

D. Establish systems for integrated environment and economic accounting
Develop and standardize environmental and economic accounting methods (8.43b)
Provide training on integrated environmental and economic accounting (8.43c)
Develop sustainable development indicators for planning and decision-making (8.44a)
Improve capacity to collect, analyze and integrate environmental and economic data (8.49)
Train decision-makers in effective use of new environmental and economic information (8.54)

An integrated environment and development approach is more effective and also less costly for governments in the short and longer term. Although additional funds are needed to deal with the backlog of environmental degradation, the focus of the new agenda is on *changing policies to avoid* future environmental problems.

Governments can serve industrial development and environmental goals in ways that do *not* increase expenditure by, for example, changing tax policies to allow accelerated depreciation allowances and tax writeoffs for corporate investments in pollution control and cleaner production technologies. Policy changes can actually reduce government expenditure by abolishing agricultural, energy and other subsidies which encourage the over exploitation or inefficient use of resources. Other policy measures such as effluent charges, user charges, product charges and administrative fees even provide additional revenue while measures such as deposit-refund schemes for potentially polluting products can be largely self-financing and budget neutral.

In sum, under the new Agenda 21 for environment *and* development governments can use a much broader range and mix of regulatory measures and economic incentives to ensure that national development becomes both ecologically *and* economically sustainable. The priority areas in Agenda 21 contain many specific recommendations on the kind of changes needed in existing policies and programmes at the national and international levels. These have significant implications for the existing SADC structure and regional programmes.

2. Implications of Agenda 21 for Key SADC Sectors

As indicated in the SADC/ELMS survey results in Table 2.2, the national implementation of Agenda 21 is considered "inadequate" by experts in most SADC countries. Although over two years have now elapsed since the 1992 Earth Summit, the integration of environment in the policies, plans and programmes of the major economic and sectoral Ministries is also still considered "inadequate" in the majority of SADC countries.

At the regional level the representatives of the same Ministries set the priorities and programmes for the corresponding SADC policy sectors. It is therefore not surprising that regional implementation of Agenda 21 also remains inadequate, especially the integration of environment and development in key SADC sector policies and programmes.

Agenda 21 nevertheless remains a pioneering report with significant implications and many innovative proposals of direct relevance to regional priorities and programmes for moving toward sustainable development in the SADC region. A summary is included in the Annex of relevant Agenda 21 goals, priority programmes and recommendations for action for key SADC policy sectors. Although the SADC Food, Agriculture and Natural resources (FANR) group of policy areas and sectors are particularly important for environment and natural resources management, other key SADC sectors such as energy, Transport and Communications, and industry and Trade also have relevant responsibilities. As the summary in the Annex is indicative rather than comprehensive, a maximum of only three of the most relevant Agenda 21 recommendations are cited for each priority programme.

Table 2.2
Environmental Assessment, Awareness and Action in the SADC Region

The ELMS questionnaire included an evaluation by officials in each country of the present situation concerning key aspects of environmental assessment, awareness and action. The results are summarized below. The figures indicate the number of countries in each category. Not all countries reported. The table will be updated as additional information is made available.

Environmental Assessment	**Poor**	**Inadequate**	**Adequate**	**Good**	**Excellent**
Environmental monitoring	2	6	1	...	...
State-of-environment reporting by government	3	5	1	...	...
State-of-environment reporting by NGOs	3	6	...	...	...
Environmental impact assessments by Government	...	7	2	...	...
Environmental impact assessments by industry	5	4	...	...	...
Public Awareness and Action	**Poor**	**Inadequate**	**Adequate**	**Good**	**Excellent**
Environmental awareness among the public	1	4	3	1	...
Environmental awareness in industry	2	5	2	...	...
Environmental action by NGOs	2	5	2	...	
Environmental Law	**Poor**	**Inadequate**	**Adequate**	**Good**	**Excellent**
Scope of environmental legislation	1	6	2	...	...
Enforcement of environmental laws	1	7	1	...	...
Environmental Cooperation	**Poor**	**Inadequate**	**Adequate**	**Good**	**Excellent**
Governmental inter-Ministerial cooperation on environment	...	5	3	1	...
Government-industry cooperation on environment	4	3	2	...	...
Government-NGO cooperation on environment	1	4	3	1	...
Integration of Environment and Development	**Poor**	**Inadequate**	**Adequate**	**Good**	**Excellent**
Use of economic incentives in environmental policy	6	3	...	...	...
Integration of environment in economic planning	...	9	...	...	...
Integration of environment in sectoral policies	...	9	...	...	...
Integration of environment in govt decision-making	...	7	2	...	...
Integration of environment in industry decision-making	2	6	1	...	...
Integration of environment in school curricula	1	4	4	...	...
Implementation of Agenda 21	**Poor**	**Inadequate**	**Adequate**	**Good**	**Excellent**
National implementation of Agenda 21	1	7	1	...	...

Sources: Replies to the 1994 SADC/ELMS questionnaire and information provided during ELMS missions.

The following summary provides an overview of the main Agenda 21 goals for key SADC sectors and the number of relevant priority programmes and recommendations for each (see Annex for more details).

(a) SADC Agriculture, Food Security and Livestock Sectors

Agenda 21 includes the following 2 main policy goals: *Ensure Sustainable Agriculture and Rural Development* (Goal 14); and *Strengthen the Role of Farmers* (Goal 32). Together they include 13 priority programmes with over 200 recommendations for action on sustainable agriculture, food security, livestock, rural development and the role of farmers.

(b) SADC Forestry Sector

Agenda 21 includes *Combat Deforestation* (Goal 11) as a main policy goal and 4 priority programmes with over 115 recommendations for action.

(c) SADC Fisheries and Marine Resources Sector

Agenda 21 includes *Protect Oceans and Marine Resources* (Goal 17) as a main policy goal and 6 priority programmes with over 250 recommendations for action on the integrated management and sustainable use of coastal and marine resources, the assessment of climate change on the marine environment and expanded international cooperation.

(d) SADC Inland Fisheries Sector

Agenda 21 includes *Protect the Supply and Quality of Water Resources* (Goal 18) as a main policy goal and 3 priority programmes with over 70 recommendations for action on protecting water resource quality and aquatic ecosystems and expanding aquaculture.

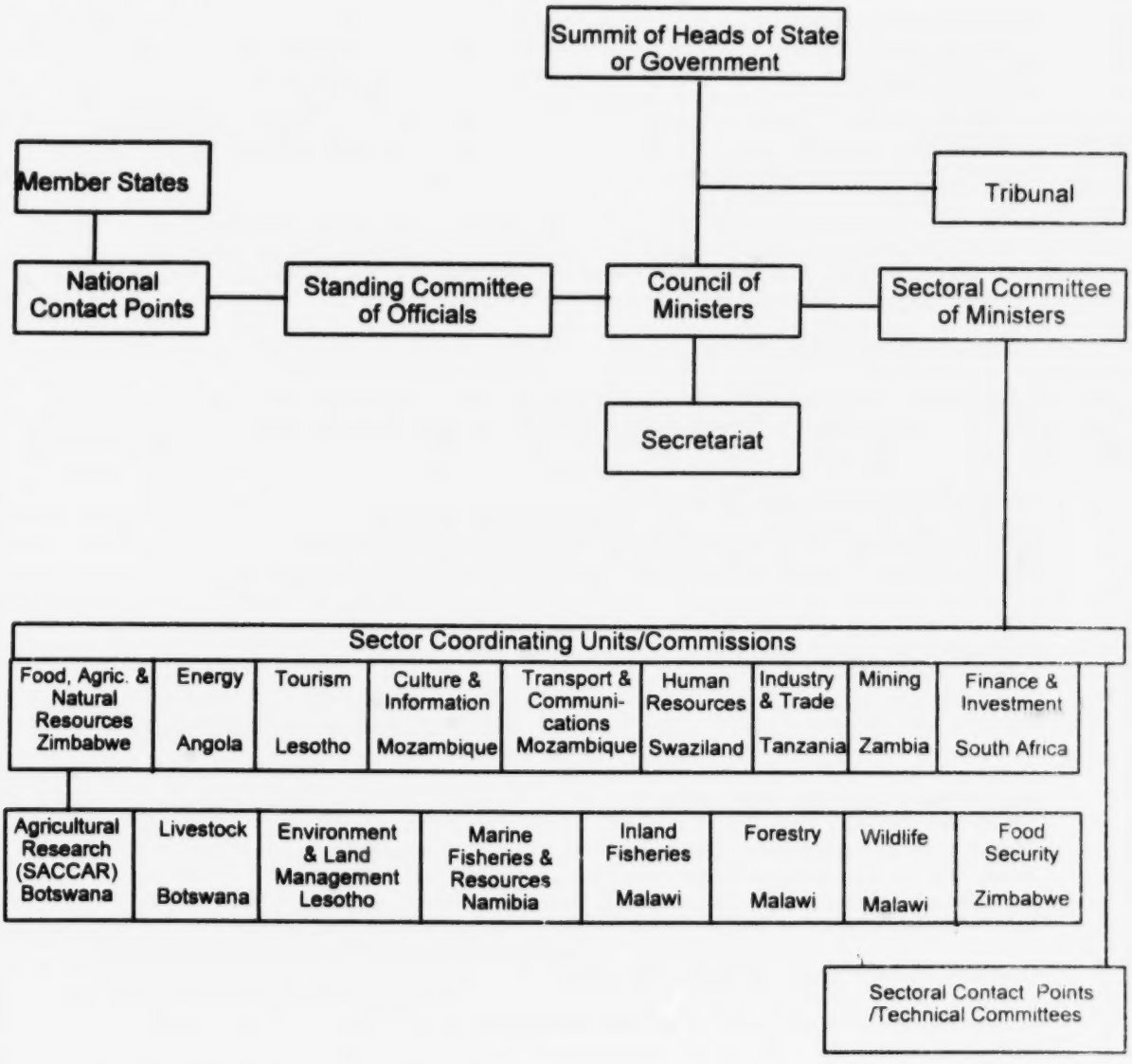
(e) SADC Environment and Land Management Sector

Agenda 21 includes the following 14 main policy goals: *Ensure Sustainable Human Settlements* (Goal 7); *Protect the Atmosphere* (Goal 9); *Ensure Integrated Planning and Management of Land Resources* (Goal 10); *Combat Desertification and Drought* (Goal 12); *Improve the Management of Mountain Ecosystems* (Goal 13); *Protect the Supply and Quality of Water Resources* (Goal 18); *Strengthen the Role of NGOs* (Goal 27); *Strengthen the Role of the Scientific Community* (Goal 31); *Strengthen Science for Sustainable Development* (Goal 35); *Expand Education, Public Awareness and Training* (Goal 36); *Strengthen Mechanisms for International Cooperation* (Goal 37); *Strengthen International Institutional Arrangements* (Goal 38); *Strengthen International Law* (Goal 39); and Improve Information for Decision-Making (Goal 40). Together they include 36 priority programmes with over 760 recommendations for action on sustainable land use, protecting the atmosphere, combating desertification and drought, water resources management, creating new partnerships for sustainable development, environmental education and training, strengthening international law, cooperation and dispute settlement procedures. Over a third of the recommendations are on water resource management.

(f) SADC Energy Sector

Agenda 21 includes the following 3 main policy goals: *Ensure Sustainable Human Settlements* (Goal 7); *Protect the Atmosphere* (Goal 9); and *Ensure Sustainable Agriculture and Rural Development* (Goal 14). The 3 priority programmes include over 50 recommendations for action on sustainable energy systems in human settlements, the reduction of the atmospheric effects of energy activities and the acceleration of the rural energy transition to increase productivity.

Table 2.3
SADC Decision-Making Structure and Sectors



(g) SADC Transport and Communications Sector

Agenda 21 includes the following 2 main policy goals: *Ensure Sustainable Human Settlements* (Goal 7); and *Protect the Atmosphere* (Goal 9). The 2 priority programmes contain over 45 recommendations for action on sustainable transportation systems in human settlements and the reduction of the atmospheric effects of transportation.

(h) SADC Industry and Trade Sector

Agenda 21 includes the following 7 main goals: *Accelerate Sustainable Development in Developing Countries* (Goal 2); *Ensure Sustainable Human Settlements* (Goal 7); *Protect the Atmosphere* (Goal 9); *Strengthen the Management of Hazardous Wastes* (Goal 20); *Strengthen the role of Workers and Trade Unions* (Goal 29); *Strengthen the role of Business and Industry* (Goal 30); *and Improve the Transfer of Environmentally Sound Technology* (Goal 34). Together they include 12 priority programmes with over 260 recommendations for action on trade, industry, protection of the atmosphere, the management of hazardous wastes, worker health and safety, cleaner production technologies and the transfer and use of environmentally sound technologies.

As indicated by the above summary and the more detailed listing in the Annex, the place, scale and success of the transition toward sustainable development in the SADC region will be determined by policy changes and concerted action in many different sectors and by much greater coordination and cooperation among the key sectors. These crucial requirements are incorporated in the new SADC policy and strategy proposed in the concluding chapter.

3. Policy Gaps in the Present SADC Structure

The following Agenda 21 goals and priority programmes are not specifically covered by the mandate of an existing SADC sector group. The relevant paragraph numbers in the official UNCED report (A/CONF.151/26) appears in brackets after each entry.

Goal 5: Manage Demographic Change
Assess the links between demographic factors and sustainability (5.6 - 5.15)
Build demographic factors into national sustainable development policies (5.18 - 5.41)
Build demographic factors into local sustainable development programs (5.44 - 5.65)

Goal 6: Protect Human Health
Meet primary health care needs especially in rural areas (6.5 - 6.9)
Control communicable diseases (6.12 - 6.17)
Protect vulnerable groups (6.27 - 6.31)
Improve urban health (6.24 - 6.38)
Reduce health risks from environmental pollution and hazards (6.41 - 6.46)

Goal 7. Ensure Sustainable Human Settlements
Provide adequate shelter for all (7.9 - 7.12)
Improve human settlements management (7.16 - 7.26)
Ensure integrated and adequate provision of environmental infrastructure (7.39 - 7.34)
Strengthen settlements planning and management in disaster-prone areas (7.60 - 7.64)
Improve human settlements institutions, expertise and public participation (7.77 - 7.80)

Goal 15: Conserve Biological Diversity (15.5 - 15.11)

Goal 16: Manage Biotechnology on an Environmentally Sound Basis
Increase the availability of food, feed and renewable raw materials (16.5 - 16.10)
Improve human health (16.13 - 16.19)
Improve environmental protection (16.23 - 16.28)
Increase safety and international cooperation (16.32 - 16.39)
Develop and apply biotechnology on an environmentally sound basis (16.40 - 16.46)

Goal 19: Strengthen the Management of Toxic Chemicals
Expand and accelerate the international assessment of chemical risks (19.14 - 19.23)
Harmonize the classification and labeling of chemicals (19.28 - 19.32)
Exchange information on toxic chemicals and risks (19.39 - 19.43)
Establish chemical risk reduction programs (19.49 - 19.54)
Strengthen national capabilities for chemicals management (19.59 - 19.65)
Prevent illegal international traffic in toxic and dangerous products (19.75)

Goal 21: Strengthen the Management of Solid Wastes and Sewage
Minimize wastes (21.10 - 21.15)
Maximize environmentally sound waste reuse and recycling (21.19 - 21.26)
Ensure environmentally sound waste treatment and disposal (21.30 - 21.37)
Expand waste collection and disposal services (21.40 - 21.49)

Goal 28: Strengthen the Role of Local Authorities (28.3 - 28.7)

Goal 31: Strengthen the Role of the Scientific Community
Establish codes of Practice and guidelines for science and technology (31.4 - 31.12)

The mandates of several existing SADC sector groups could be extended to cover some of these key environment and development issues. For example:

* *Demographic change issues* could be addressed by an expanded SADC "Population and Human Resources" programme.
* *Biodiversity issues* could be included in an expanded SADC Environment and Land Management programme.
* *Biotechnology issues* could be incorporated in the SADC agriculture and food security programmes.
* *The management of toxic chemicals as well as parts of solid wastes management issues* could be tackled by the SADC Industry and Trade sector and/or the SADC Environment and Land Management programme.

The two Agenda 21 priority areas of "Human Health" and "Human Settlements" remain without a convenient home in the present SADC structure. As both are crucial areas of national policy and regional concern as SADC countries move toward an increasingly integrated regional community, serious consideration should be given to establishing a new SADC regional programme and group for each.

4. Post-Rio Action in the SADC Region

"Sustaining Our Common Future", the SADC report for the 1992 Earth Summit in Rio de Janeiro, set out the following goals and proposals for national and regional action (SADC, 1991m, pp. 19-30).

SADC's Pre-Rio Agenda

Expanding Environmental Assessment and Reporting
* Extend and link environmental monitoring
* Assess and report on environmental conditions and trends

Strengthening Our Environmental Institutions and Laws
* Increase the capabilities of national environment agencies
* Expand environmental education and training programmes
* Strengthen environmental standards and laws

Integrating Environment and Development
* Integrate environment into national development plans
* Ensure the sustainability of economic policies and programmes
* Assess the economic sustainability of environmental policies and programmes
* Demonstrate integrated approaches to sustainable land management
* Assess the environmental impact of development projects
* Introduce new sustainable development analysis and reporting

Building New Partnerships
* New partnerships with rural communities
* New partnerships with NGOs
* New partnerships with industry

Financing Our Transition to Sustainable Development
* Make greater use of economic incentives and disincentives
* Reallocate our peace dividend
* Increase development assistance

Strengthening International Cooperation and Law
* Link national plans and programmes for sustainable development
* Strengthen international law
* Avoid and settle environmental disputes

Today this pre-Rio SADC agenda still remains largely valid as a shortlist of priority actions yet to be taken. Nevertheless, in the two years since the Rio Conference the SADC countries have taken some significant steps forward. For example:

New environmental policies and actions plans were developed: As indicated in Table 1.2, new national environmental policies and conservation strategies were adopted or will soon be completed in most SADC countries. World Bank sponsored National Environmental Action Plans (NEAP) were completed or are now under preparation in Lesotho, Malawi, Mozambique, Swaziland, Tanzania, Zambia and Zimbabwe.

New resource management policies and laws were adopted: As also indicated in Table 1.2, all SADC countries put in place at least some new policies and laws in key resource management areas such as agriculture, biodiversity, fisheries, forestry and soil, water and wildlife conservation.

New environmental impact assessment measures were introduced: New environmental impact policies, laws and regulations have been prepared in Botswana, Namibia, South Africa, Zambia and Zimbabwe.

Cooperation on shared water resources advanced: Several Zambezi Action Plan projects were completed and new initiatives launched on an integrated water management plan. A detailed regional protocol containing new principles and guidelines for shared watercourse systems has been prepared.

Support for the development of international environmental law increased: SADC countries took an active part in the pre and post-Rio negotiations on new international agreements (e.g. climate change, biodiversity, desertification) and, as indicated in Table 2.4, have completed or are considering the ratification of key conventions.

Public awareness increased: UNCED publicity and national information programmes for and after the Earth Summit created greater public awareness on many national, regional and global environment and development issues. Success in implementing the new agenda depends on the support of an informed and involved public.

New partnerships are evolving Inter-Ministerial, government-industry and government-NGO cooperation generally improved. National conferences on implementing Agenda 21 involving experts from within and outside government were held in Tanzania and Zimbabwe. The number, membership and activities of local and national environmental NGOs generally increased. New initiatives were taken among NGOs to improve regional exchanges of information and cooperation.

Despite these achievements the SADC survey results reported in Table 2.2 reflect the view of top national experts that implementation of Agenda 21 has generally been inadequate. That does not diminish the achievements. It does reflect the fact that Agenda 21 contains such a large number and wide range of recommendations for action that much more remains to be done in the SADC region. Also, the achievements to date have largely been to strengthen the policy and legal framework for change toward sustainable development.

What is now needed is action to implement the new national policies, strategies and regulations, supported by new regional programmes on the assessment of environmental conditions and trends, the harmonization of environmental standards and laws, transboundary pollution and resource management problems and capacity building.

Table 2.4
Key Environmental Agreements Supported by SADC Countries

Year = Date ratified **R** = Ratified but date unknown **C** = Considering ratification

International Agreements	Ang	Bot	Les	Mal	Moz	Nam	RSA	Swa	Tan	Zam	Zim
1951 - Plant Protection	...	...	...	74	...	...	...	...	...	86	...
1958 - Continental Shelf	...	...	...	...	...	...	64	...	...	...	...
1958 - High Seas	...	...	73	65	...	...	63	70	...	...	...
1958 - Living Resources of the High Seas	...	...	73	66	...	...	66	...	...	...	...
1959 - Antarctic Treaty	...	...	...	...	...	...	61	...	...	...	...
1963 - Banning Nuclear Weapons Tests	...	64	...	65	...	...	63	69	64	65	...
1967 - Exploration and Use of Outer Space	...	...	...	...	...	...	68	R	...	73	...
1967 - Phyto-Sanitary Convention for Africa	...	...	83	...	...	...	C	...	...	...	...
1968 - African Nature Conservation	...	...	...	73	81	...	...	69	74	72	...
1969 - Civil Liability for Oil Pollution Damage	...	...	...	...	...	...	76	...	...	...	...
1969 - Intervention on Oil Pollution Casualties	...	...	...	...	...	...	86	...	...	...	...
1971 - Nuclear Weapons on the Seabed	...	72	73	...	...	...	73	72	...	72	...
1971 - Wetlands of International Importance	...	...	...	...	...	C	75	...	...	91	...
1972 - Bacteriological and Toxic Weapons	...	...	77	...	...	...	75	...	...	...	R
1972 - Marine Dumping of Wastes	...	...	...	...	...	...	78	...	...	...	...
1972 - World Cultural and Natural Heritage	...	...	...	82	83	...	C	...	77	84	82
1973 - Trade in Endangered Species	...	78	...	82	81	90	75	...	80	81	81
1974 - Occupational Hazards by Carcinogenic Agents	...	...	...	...	...	...	...	...	...	...	...
1976 - Hostile Use of Environmental Modification	...	...	...	78	...	...	...	...	...	...	...
1977 - Occupational Hazards at Work	...	...	...	...	...	...	...	...	84	81	...
1979 - Migratory Species of Wild Animals	...	...	...	...	C	...	91	...	...	...	...

1980 - Antarctic Marine Living Resources	...	...	...	...	...	...	82	...	...	...	...
1981 - Occupational Safety and Health	...	...	...	...	...	...	...	...	...	...	...
1982 - Law of the Sea	82	84	82	84	82	82	84	84	82	82	82
1983 - Tropical Timber Agreement	...	...	...	...	...	...	...	...	...	...	...
1985 - Protection of the Ozone Layer	...	...	...	...	93	94	90	C	...	90	...
1987 - Action Plan for the Zambezi River	...	87	...	...	87	92	...	...	87	87	87
1987 - Montreal Protocol on Ozone Layer	...	...	...	...	93	94	90	C	...	90	...
1989 - Transboundary Movement of Hazardous Wastes	...	...	...	...	C	C	94	C	...	94	...
1990 - Oil Pollution Preparedness	...	...	...	...	...	...	...	...	...	...	...
1991 - Environmental Impact Assessment	...	...	...	...	...	...	...	...	...	...	...
1991 - Hazardous Wastes within Africa (Bamako)	...	...	...	...	C	C	...	C	...	...	...
1992 - Biological Diversity	...	...	...	...	C	C	94	...	...	93	...
1992 - Climate Change	...	...	...	...	C	94	C	...	...	93	...
1992 - Tranboundary Effects of Industrial Accidents	...	...	...	...	...	...	...	...	...	...	...
1992 - Transboundary Watercourses and Lakes	...	...	...	...	...	C	...	...	...	...	...
1994 - Desertification	...	...	...	...	...	C	...	...	...	...	...

Sources: *Register of International Treaties and Other Agreements in the field of Environment (Nairobi: UNDP, 1991), World Resources Report 1992-93 (p.360)* and information provided by the ELMS missions. This chart will be updated as more information becomes available.

PART 3

Moving Beyond Agenda 21 in the SADC Region

1. Poverty Alleviation the Priority

"Sustaining Our Common Future", the SADC special report to the 1992 Earth Summit, concluded with the following statement (SADC, 1991m, p. 32):

> Throughout the negotiations before and during the Rio Conference in June 1992 we must never forget that the majority of people and countries in the SADCC region and the world are poor. If the poor sometimes behave in a way that degrades the environment it is not because they choose to do so. They only do so when they have no other choices.
>
> The Earth Charter and Agenda 21 must expand the development choices and opportunities for the majority of poor people, communities and countries.... no new political and economic arrangements within or among our countries can be called sustainable if they fail to change the present situation of a rich minority and poor majority by significantly reducing the gap between them.
>
> The Earth Charter and Agenda 21 must provide a new basis for a new deal for the majority of poor people and countries in order to secure and sustain our common future.

Agenda 21 unfortunately does *not* provide "a new basis for a new deal for the majority of poor people and countries". In Rio, poverty alleviation got far more attention in plenary speeches than in the plan of action. The final version of Agenda 21 includes "Combating Poverty" as just one of 38 goals. In Agenda 21 "Enabling the poor to achieve sustainable livelihoods" is only one of 131 priority programmes and includes only 33 out of the over 2,500 recommendations for action.

In the SADC region, alleviating the poverty of the majority of over 120 million people in the region is *the* overriding goal and priority. Improving the health, income and living conditions of the poor majority remains the top policy imperative for ensuring the political stability and social sustainability needed to move toward greater economic and environmental sustainability.

While adopting the innovative approach of Agenda 21 for integrating *environment and development*, a third crucial element must be added to make Agenda 21 more applicable and operational for the SADC region. The critical missing link is *equity*.

Greater equity is needed throughout the SADC region in the distribution of the opportunities and benefits of national economic development and international aid programmes. At present, too few national or international aid programmes reach or benefit the majority of those among the poor majority. Consequently, as repeatedly emphasized in the 1994 "State of the Environment in Southern Africa":

> The continuing trend toward poverty is a destructive force in relation to the environment, often associated with rapid population growth which is also considered negative, although less strongly than poverty.... (p.293)
>
> Population studies show that growth rates decline where poverty is reduced.... If distribution of wealth or programmes enhancing quality of life do not become more universally available then more individuals will become poor(er). Poverty will have to be addressed before population growth can be expected to drop.... (p.296)

Throughout the SADC region poverty remains a main cause *and* consequence of the environmental degradation and resource depletion which in turn undermines the possibilities for future economic growth. Greatly expanded and more effective poverty reduction programmes are needed for economic as well as environmental sustainability. Without significant improvements in the lives and livelihoods of the poor majority, environmental policies and programmes in the SADC region have little chance of success. As the 1994 "State of the Environment in Southern Africa" concluded:

> *Only with improved standards of living will there be any likelihood of a decease in the rapid population growth and a release of pressures on natural resources* While there may be any number of opportunities to enact legislation to protect the environment, inform people on how and why to protect the environment and develop more efficient, environmentally friendly ways of using the environment's resources, *none of these are likely to* be *effective unless poverty is reduced and population growth declines....* (p.306)

The poor are *not* the cause of poverty-driven environmental degradation. With too few choices for ensuring their own survival, the poor majority are *not* the problem. The national development and international aid policies which fail to involve, reach and benefit the poor majority are the problem. Economic, social and environmental policies which too often ignore the poor, and especially policies which worsen their situation and prospects, must be changed as a matter of priority.

Changes for greater equity and sustainable development are needed, for example, to shift the emphasis and priorities:

- *In economic development policies* focused largely on the formal sector toward policies supporting the much larger informal sector which is the main source of jobs, income and affordable goods and services for the poor majority.

- *In agricultural policies* promoting large scale production for export of food and horticultural crops toward policies focused on the food security of poor rural and urban households and fair returns for small scale farmers.

- *In land tenure laws and policies* excluding women toward policies recognizing and expanding the rights of women to inherit and own land.

- *In health policies* which allocate a disproportionate share of the budget to specialized medical services and hospitals toward policies focussed on primary health care services which are affordable and accessible for the poor majority.

- *In human settlements policies* which emphasize more planning, research and delivery of unaffordable housing toward policies giving top priority to the lethal shelter, water and sanitation problems of the poor majority in urban and rural settlements.

- *In wildlife and parks policies* where local people bear many of the costs toward policies which give local people and communities a greater voice in wildlife management and a significant share of the benefits of wildlife-based tourism.

- *In international lending policies*, especially structural adjustment policies which adversely affect the poor majority first and most, toward *UN system-wide policies and programmes* of economic reform for greater equity and sustainable development.

The first and most important definition of *equity is* not particularly complicated. It basically *means fairness*. What constitutes 'fairness' is generally well understood even on nursery school playgrounds. 'Fairness' becomes more complicated when the playground is the national or global economy where 'might is right' too often prevails.

However, national or global policies which adversely affect the poor majority are neither 'fair' in the short term nor 'right' in the longer term. The adverse economic, social and environmental consequences of inequitable national and global policies are largely borne by the poor majority of people and countries in the short term and by all later generations in the long term.

Apart from 'fairness', the Oxford English Dictionary includes two other definitions of *equity* which are also relevant to environmental management and sustainable development.

> *Equity is* the "net value of mortgaged property after deduction of charges". As *unsustainable* development increases the environmental debt of future generations and is 'borrowing from our children' without their consent, the present generation *is not* acting fairly by mortgaging the future and reducing the equity for later generations.

Equity also means the "value of shares issued by a company". Everyone in the region should have as a birthright an *equitable share* in the development benefits in the new SADC community. A similar multistakeholder approach also applies to the *equitable and sustainable use* of shared natural resources in the SADC region.

2. Equity-Led Growth and Sustainable Development in the SADC Region

The equity value and shares for the poor majority and future generations need to increase throughout the SADC region. The introductory chapter sets out some of the main reasons why economic growth with greater equity is needed in the SADC region (see section 4 on "Accelerating Growth with Greater Equity") and provides an overview of key environmental issues and priority concerns which undermine future economic growth and sustainable development (see section 5 on "Managing the Environment and Resource Base").

The common factor and threat for both economic growth and environmental improvement is the poverty of the poor majority in the SADC region. To move toward sustainable development the best starting point and most important environment and development policy *is equity-led growth* within and among SADC countries.

After several United Nations Development Decades, traditional international development strategies have largely failed to achieve even their own larger goals (e.g. export-led growth and import substitution strategies, industrial development plans, structural adjustment policies, etc.). The end result in the SADC region and many other developing countries has often been little or marginal economic growth. What is more difficult to explain or defend is that the poor generally became poorer and more numerous. Top-down and often externally driven development strategies focused on the formal sector yielded some benefits but too often these were largely retained at the top with only a trickle reaching the poor.

New criteria and measures for assessing economic, social and environmental sustainability should now be prepared and applied before adopting any new development policies and strategies (e.g. see the later proposal on EIA[3]). At present, for example, economic growth strategies which fail to improve the lives and livelihoods of the poor majority are *not* socially or politically sustainable. Economic growth strategies which degrade the environment and resource base needed for future development are *not* ecologically or even economically sustainable. Growth strategies which are not economically, socially and environmentally sustainable, however spectacular the short term results may be, are *not* and should *not* be called development.

Even from a strictly environmental point of view, new equity-led growth strategies are needed to expand the survival options and development opportunities for the poor majority in order to reduce poverty-driven degradation of the soil, water, forests and biodiversity. As repeatedly emphasized throughout the 1994 "State of the Environment in Southern Africa":

> When people lack adequate financial and other resources they often have little choice but to take what they can from the natural environment to meet their needs without consideration for the future. They may be forced to treat their land badly by growing crops without replacing lost nutrients or allowing erosion because they cannot afford the resources and the loss of crop-growing areas needed for conservation works. Dung and crop residues which can add nutrients and structure to soil may have to be burned for heating and cooking...(p.293)

Both *equity* and *economic growth* are crucial for environmental improvement and sustainable development in the SADC region.

- *Without greater equity* in sharing the benefits of development, economic growth cannot be sustained. Rising poverty and population pressures on the resource base will accelerate and undermine the possibilities for further economic growth.

- *Without economic growth* there will be few or no benefits to share. Poverty-driven environmental degradation will continue to accelerate. Moreover, without economic growth countries cannot generate the resources needed to tackle the already large backlog of environmental damage and pollution in the SADC region.

- *Without economic growth and greater equity* then the interlinked problems of poverty, population growth and environmental degradation will inevitably increase and perpetuate unsustainable development throughout the SADC region.

The 1994 report on the "State of the Environment in Southern Africa" summarized the challenge as follows:

> *Economic development is key to the future.* Governments need funds to manage the environment and to provide services such as education and health which have positive environmental spin-offs. Industries need funds to grow and to install clean, efficient technology. Farmers need money to pay for inputs and to undertake proper soil management and conservation. *Access to all these inputs will require a substantial increase in economic growth in the region. (p.296)*

Economic growth is clearly *not* at issue. Accelerated economic growth is needed in all SADC countries. What is at issue is the kind and content of that growth. Future economic growth in the SADC region must particularly become more equitable, less polluting and more efficient in the use of energy and natural resources. In sum, future economic growth in the SADC region must become economically, socially and environmentally sustainable.

3. New Goals for Economic, Social and Environmental Sustainability in the SADC Region

Equity-led growth strategies which put and keep the focus of development on the poor majority of people and countries are the top priority and essential first step for moving toward sustainable development in the SADC region and globally. By shifting the focus to people rather than projects, equity-led growth shares some of the key goals and attributes with the sustainable *human* development approach pioneered by UNDP as development *of* the people for the people and *by* the people.

The main purpose of sustainable *human* development is "to widen the range of people's choices". That requires new approaches to development "to invest in human potential and to create an enabling environment for the full use of human capabilities". That will also require the reorientation of development aid. At present less than 7% of development aid is "directed at human priority issues such as health and basic education and at environmental security and reducing population growth.... At least 20% of total aid should be allocated to human priority concerns." (UNDP, 1993, pp.1-8).

Both equity-led growth and sustainable *human* development strategies put people at the centre of the development process as the prime moving force and the subject rather than an object of development. For example:

> * *Development of the people* means investing in human capabilities, whether in education or health or skills, so they can work productively and creatively.
> * *Development for the people* means ensuring that the benefits of development are distributed widely and fairly.
> * *Development by the people* means giving local people and communities more opportunities to participate and contribute to development planning and implementation.

New goals and a new agenda are needed for economic, social and environmental sustainability. The three overall goals for a new equity-led growth and sustainable development strategy for the SADC region are:

> *** To accelerate economic growth with greater equity and self reliance;**
> *** To improve the health, income and living conditions of the poor majority;**
> *** To ensure equitable and sustainable use of the environment and natural resources for the benefit of present and future generations.**

These three goals constitute one agenda for action. None of the goals are achievable without the other two.
In the SADC region economic growth is *not sustainable* without protecting the environment and resource base on which future development depends. Environment and social improvement programmes are *not feasible* without the financial resources generated by economic growth. Most importantly, economic and environmental sustainability are *not achievable* without significant improvements in the lives and livelihoods of the poor majority.

Some of the key policy concerns and main objectives for a single new agenda and strategy for equity-led growth and sustainable development are briefly set out in Table 3.1. The matrix is first arranged according to some of the critical basic needs of people and nations such as water, food health, shelter and services, energy, education and income. The main objectives in each of these areas are then briefly stated in terms of the three overall and interrelated goals of economic, social and environmental sustainability.

Of the three columns, social sustainability and equity issues are intentionally listed in the middle column. They are the new and crucial link between economic and environmental sustainabilirv issues and objectives. They are also the missing third component needed to make Agenda 21 on environment and development more relevant to conditions and needs in southern Africa.

To achieve equity-led growth and sustainable development in the SADC region and many other developing countries, greater equity is also needed in international trade and debt policies As repeatedly emphasized in the Earth Summit debates and Agenda 21, unfavorable terms of trade and debilitating debt burdens are major causes of the escalating poverty and environmental degradation in many developing countries, especially the poorest countries. Without more equitable international economic arrangements, most developing countries in and outside the SADC region have limited scope and little hope for achieving economic, social and environmental sustainability.

4. Integrating EIA³ in Decision-Making

Throughout the SADC region the largely separate policies and programmes for economic reform, social progress and environmental improvement must be increasingly integrated in a single agenda and strategy for sustain able development.

At present the structural adjustment policies for economic recovery and growth, the human development programmes for improving health and living conditions, and the action plans for environmental protection and improvement are all usually conceived and implemented separately. The failure to link and integrate these crucial policies and programmes undermines the chances of achieving the longer and even short term goals for any one of them.

Agenda 21 includes many recommendations calling for the wider use and integration of environmental impact assessments (EIA's) in major economic and sectoral policies and programmes. Since the Rio Conference five SADC countries have introduced new environmental impact assessment policies, laws and procedures. While representing a significant step toward greater environmental sustainability, EIA's alone are not enough to secure sustainable development.

The new Agenda and strategy for securing economic, social and environmental sustainability needs to be anchored and reinforced by incorporating impact assessments as an integral part of decision-making in at least three key respects:

* Assessing the likely *environmental impacts* of economic policies and activities;
* Assessing the likely *economic impacts* of environmental policies and measures;
* Assessing the likely *equity impacts* of both economic and environmental policies.

The integration in all key policy sectors of simultaneous economic, environmental and equity impact assessments (EIA³) will certainly not make decision-making easier. EIA³ will inevitably increase rather than reduce the number and complexity of the trade-offs involved in most major decisions. EIA³ will, however, significantly improve the chances of making better decisions in support of sustainable development. By identifying and making those trade-offs more explicit, and preferably more public as well, EIA³ will increasingly compel decision-makers to assess and defend their policy choices in terms of economic, social and environmental sustainability.

Although there are few absolutes in public policy at least one should prevail in the SADC region. *If major public policies and programmes do not lead to at least some improvements in the living conditions and prospects of the poor majority, then alternatives must be found that do.*

With the commitment built into a new equity-led growth and sustainable development strategy, SADC members can fulfil their own appeal to the 1992 Earth Summit to *"provide a new basis for a new deal for the majority of the poor people and countries in order to secure and sustain our common future."*

Table 3.1

Sustainable Development Goals in the SADC Region

	Economic Sustainability	Social Sustainability	Environmental Sustainability
Water	Ensure the adequate supply and efficient use of water for agricultural, industrial, urban and rural development	Ensure adequate access of the poor majority to clean water for domestic use and small scale agriculture	Ensure adequate protection of watersheds, aquifers and freshwater ecosystems and resources
Food	Increase agricultural productivity and production for regional food security and export	Improve productivity and profitability of small scale agriculture and ensure household food security	Ensure sustainable use and conservation of land, forest, wildlife, fisheries and water resources
Health	Increase productivity through preventive health care and improved health and safety at the workplace	Enforce air, water and noise standards for protecting human health and ensure basic health care for the poor majority	Ensure adequate protection of biological resources, ecosystems and life support systems
Shelter & Services	Ensure the adequate supply and efficient use of resources for buildings and transportation systems	Ensure adequate access to affordable housing, sanitation and transportation by the poor majority	Ensure sustainable use or optimum use of land, forest, energy, and mineral resources
Energy	Ensure the adequate supply and efficient use of energy for industrial development, transportation and household use	Ensure adequate access to affordable energy by the poor majority, especially alternatives for fuelwood	Reduce local, regional & global environment impacts of fossil fuels & expand the development & use of forest & other renewable alternatives
Education	Ensure the availability of trained people for all key economic sectors	Ensure adequate access for all to education for a healthy and productive life	Integrate environment in public information & education programmes
Income	Increase economic efficiency, growth and employment opportunities in the formal sector	Support small scale enterprises and job creation for the poor majority in the informal sector	Ensure sustainable use of natural resources needed for economic growth in the formal and informal sectors

PART 4

SADC Policy and Strategy for Environment and Sustainable Development

1. An Integrated Approach Needed in the SADC Region

The Environment and Land Management (ELMS) programme evolved since the mid-1980's under the previous SADCC mandate and structure. Over the last decade the programme gradually expanded on a largely incremental basis without a comprehensive SADC policy or integrated strategic framework.

As unsustainable development accelerated throughout the region neither the national environment agencies nor the regional ELMS programme had the financial or staff resources to cope with the accumulated backlog and escalating pace and scale of environmental degradation. The largest resource in the region, the energy and talents of local people such as small-scale farmers and many women who are directly involved every day in the management of natural resources, remained largely untapped because participatory approaches to research, planning, decision-making and implementation were usually lacking.

Population, industrialization, urbanization and poverty continued to increase in the last decade throughout the SADC region. Many of the poor became poorer and the number of poor grew larger, putting even greater pressures on vulnerable soil, forest, water and wildlife resources (see relevant analysis in Parts 1 and 3 and Tables 1.1 and 2.2).

The problem is poverty, not the poor. The main problems are national development and international aid policies which largely ignore or fail to reach the poor majority. With shrinking options for subsistence and survival, the poverty of the poor majority remains a major cause of the environmental degradation which continues to undermine present and future development possibilities.

The agenda also changed as the 1987 Brundtland Commission report and 1992 Earth Summit significantly shifted the focus and priorities for action to environment and development issues. In 1992 SADC issued a new Regional Policy and Strategy for Food, Agriculture and Natural Resources for increased agricultural production and sustainable use of the environment and natural resource base in the 1990's (SADC, 1992c). SADC members also committed to a fundamental shift from regional coordination to economic integration. Major changes in SADC's goals and functions as well as the recent membership of South Africa present many new challenges and far greater opportunities for accelerated economic growth and sustainable development in the region.

A new SADC policy and strategy for environmental and natural resource management for equitable and sustainable development is clearly both necessary and timely. The main aim of a new SADC policy and strategy is to support the overall goals of achieving development that is economically, socially and environmentally sustainable.

Although *environmental sustainability* is the starting point and main focus for a new regional environmental policy, it must also take into account the equally important *economic and social sustainability* concerns. Similarly, new SADC economic and social policies must also incorporate environmental sustainability concerns. Economic, social and environmental sustainability are together the three crucial components of *a single integrated agenda for sustainable development in the SADC region. None are achievable without the other two* (see analysis in Part 3, especially section 3 and Table 3.1).

A new SADC policy for environment and natural resource management is *not* and *cannot* be separate. It is *not* just for ELMS only. The new SADC policy must be developed and implemented as *an integrated part of a larger SADC agenda and strategy for equity-led growth and sustainable development within and among the countries of the SADC region.*

2. New SADC Environmental Policy Goals and Programme

The initial and principal components for a new SADC-wide policy and strategy for environment and natural resources management are:

(a) the main environmental policy goals;

(b) the key environmental policy areas of concern;

(c) a strategic programme on priority issues, objectives and proposals for action.

(a) Main environmental policy goals

The three main goals for a SADC-wide environmental policy are:

- **To protect and improve the health, environment and livelihoods of the people of southern Africa with priority to the poor majority;**

- **To preserve the natural heritage, biodiversity and life supporting ecosystems in southern Africa;**

- **To support regional economic development on an equitable and sustainable basis for the benefit of present and future generations.**

Three complementary and more functional goals are:

- **To strengthen the analytical, decision-making, legal, institutional and technological capacities for achieving sustainable development in southern Africa;**

- **To increase public information, education and participation on environment and development issues in southern Africa;**

- **To expand regional integration and global cooperation on environmental and natural resources management for sustainable development.**

These environmental policy goals reinforce and support the new objectives set in the 1992 SADC Regional Policy and Strategy for Food, Agriculture and Natural Resources. The following four of the six main objectives in the new FANR strategy (SADC, 1992b, p.1) are directly related to environment and natural resource management:

Objective 2: "To ensure the efficient and sustainable utilization, effective management and conservation of natural resources."

Objective 3: "To incorporate environmental considerations in all policies and programmes and to integrate the sustainable utilization of natural resources with development needs."

Objective 5: "To improve the living conditions of rural populations in member States through increased income and employment derived from the efficient and sustainable utilization or agricultural and natural resources."

Objective 6: "To ensure the recognition of the value of natural resources so that they can contribute optimally to the welfare and development of all people of the region."

These environmental policy goals also reinforce and support the overall regional objectives set out in the 1992 SADC Treaty (SADC, 1992a, p.6), especially:

Article 5, Objective 1 (a): "To achieve development and economic growth, alleviate poverty, enhance the standard and quality of life of the peoples of southern Africa and support the socially disadvantaged through regional integration."

Article 5, Objective 1 (g): "To achieve sustainable utilization of natural resources and effective protection of the environment."

(b) Key environmental policy areas

As in the Brundtland report and Agenda 21, a SADC policy to achieve the above goals will put and keep the focus on key policy areas for moving toward sustainable development. The key environmental policy and policy support areas for the SADC region include:

Key environmental policy areas

Land Management
Water Resource Management
Food Security
Energy & Sustainable Development
Population & Human Resources
Sustainable Human Settlements
Manufacturing & Sustainable Development
Mining & Sustainable Development
Health & Sustainable Development
Natural Resources Management & Biodiversity

Key environmental policy support areas

Environmental Information and Education
New Partnerships for Sustainable Development
Environmental Law & Sustainable Development
Environmental Monitoring, Assessment and Reporting
Economics of Sustainable Development
Institutional Strengthening & Capacity Building

(c) SADC Environment and Sustainable Development Programme

The priority issues, objectives and programme areas are summarized in Table 4.1 for an initial but still *indicative* SADC Environment and Sustainable Development Programme will be carved out largely by SADC member States.

The indicative programme includes important areas which fall within the mandates of other SADC units as well as the ELMS unit. As many of the key policy and programme areas transcend existing administrative boundaries and responsibilities, expanded inter-sectoral coordination and cooperation will be required.

In the final column are listed the SADC sectors and units with the lead responsibility in each programme area for ensuring close coordination and cooperation wi[h all other relevant SADC sectors and units. The programme areas to be coordinated directly by ELMS are indicated in italics. ELMS will also have the lead responsibility for coordinating the overall programme.

To complement and reinforce the larger SADC goals and agenda on equity-led growth and sustainable development, assessments of the economic, environmental and equity impacts (EIA^3) will be carried out before and during the implementation of any major activities in the programme (see Part 3, section 4 on "integrating EIA^3 in Decision-Making").

Table 4.1
SADC Environment and Sustainable Development Programme
The final column headed "SADC" refers to the SADC Lead Coordinating Sectors and Units

Policy Areas	Priority Issues	Objectives	Programme Areas	SADC
Land Management & Sustainable Development	Sustainable Land Use & Management	Make the best sustainable use of regional land resources	Complete regional land capability study & sustainable land use plan	ELMS
		To control & reduce desertification	Strengthen & implement the Kalahari-Namib & Desertification Action Plan	ELMS
Water Resources Management & Sustainable Development	Regional Water Quality	To maintain & improve surface & groundwater quality in the SADC region	Harmonize water quality standards to protect human health & aquatic ecosystem	ELMS
	Management of Shared Water Resources	To make equitable, efficient & sustainable use of shared water resources in the region	Strengthen & accelerate the implementation of the Zambezi Action Plan	ELMS
			Prepare & implement management plans for all shared water & an overall regional plan	ELMS
Food Security & Sustainable Development	Sustainable Agriculture & Food Security	To improve sustainable agriculture production, productivity & diversification in the region	Link & strengthen R&D networks, esp. on improved farming methods & on crop & livestock varieties	Agricultural Research
		To secure regional & household food security	Develop a regional & household food security strategy	Food & Agriculture
		To reduce & avoid adverse impacts of agrochemicals on human health & ecosystems	Set & apply regional guidelines on the supply & use of agrochemicals & expand non-chemical methods	Food & Agriculture
		To anticipate & mitigate the effects of floods & drought on agriculture, ecosystems & the rural poor	Strengthen regional network & capacity on flood & drought forecasting & prepare contingency plans	Food & Agriculture
		To ensure long term viability & sustainability of agricultural production	Make a long term agricultural strategy adapted for adverse climate & economic conditions	Food & Agriculture
Energy & Sustainable Development	Energy, Economic Growth & Sustainable Development	To access & reduce the impacts of transboundary air pollution	Assess & implement best options to reduce emissions causing soil & water acidification	ELMS
		To achieve sustainable energy security with a regional grid & shift to more renewable sources	Implement regional energy master plan with greater R&D investments in renewable sources	Energy

Table 4.1 (Cont.)

Policy Areas	Priority Issues	Objectives	Programme Areas	SADC
Energy & Sustainable Devel. (cont.)	Energy, Equity & Sustainable Development	To expand use of affordable & more efficient wood stoves	Establish a R&D info. exchange network on best wood stoves	Energy
		To develop env. sound & affordable options to fuelwood & for lighting for the poor majority	Create a R&D network & regional "Power to the People" Project Fund	Energy
Population & Human Resources	Population, Equity & Development	To reduce population pressures on environment & resource base	Assess issues & areas for greater share of poor majority in dev. decisions & benefits	No SADC unit W/ rel. mandate
Sustainable Human Settlements	Assess to Safe Water & Sanitation	To improve the environmental & living conditions of the poor in human settlements	Establish a regional programme & fund for the adequate supply of safe water & sanitation in human settlements	No SADC unit W/ rel. mandate
	Affordable Building Materials & Housing	To ensure affordable housing for the poor majority	Implement a regional strategy on affordable building materials & codes	No SADC unit W/ rel. mandate
	Access to Affordable Public Transportation	To ensure adequate & affordable public transportation	Establish a regional programme & procurement facility on public transport	No SADC unit W/ rel. mandate
Manufacturing & Sustainable Development	Technology & Sustainable Development	To promote more energy efficient & cleaner production technologies	Establish a register & advisory service on energy efficient & cleaner production technologies	Industry & Trade
	Work environment	To ensure adequate worker health & safety	Get regional agreement on env. health & safety at work	Industry & Trade
	Hazardous Wastes	To control the movement & disposal of hazardous wastes	Get regional agreement on control & disposal of hazardous wastes	Industry & Trade
	Investment & Sustainable Development	To ensure foreign investment & trade supports sustainable development	Integrate environment in a regional investment code (e.g. Polluter-Pays Principle)	Industry & Trade
Mining & Sustainable Development	Mining & Sustainable Development	To reduce pollution & env. impacts of mining operations	Access & reduce land degradation & water pollution from mining	Mining

Table 4.1 (Cont.)

Policy Areas	Priority Issues	Objectives	Programme Areas	SADC
Health & Sustainable Development	Human & Env. Health	To maintain basic health & env. quality in the SADC region	Set & harmonize basic health & env. quality standards in the region	ELMS
Natural Resources Management & Biodiversity	Biodiversity	To protect & improve regional biodiversity	Establish a regional strategy & network of parks & protected areas	ELMS
	Wildlife & Sustainable Land Use	To make sustainable use of land & wildlife, especially in semi-arid areas	Implement regional strategy for wildlife management & ranching	Wildlife
	Wildlife, Equity & Sustainable Development	To increase local participation & net benefits in wildlife management	Expand participatory wildlife management programmes to other countries	Wildlife
	Forestry & Sustainable Development	To maintain sustainable wood production, watersheds & habitats	Expand sustainable forestry & agroforestry programmes	Forestry
	Fisheries & Sustainable Development	To make sustainable & expanded use of freshwater fish resources	Harmonize fish management regulations & expand fish farms	Inland Fisheries
		To make sustainable & expanded use of marine fish resources	Implement regional management plans for marine fisheries & resources	Fisheries & Marine Resources
Environmental Information & Education	Environmental Information & Education	To improve public understanding & support for env. programmes	Establish a regional network & center on env. information & education materials	ELMS
New Partnerships for Sustainable Development	Business & Sustainable Development	To strengthen public & private sector cooperation	Create a regional business forum on sustainable development	Industry & Trade
	NGOs & Sustainable Development	To strengthen regional NGO networks & cooperation with governments	Support NGO networks& participation in SADC programmes	ELMS
	Youth & Sustainable Development	To involve youth in local environmental protection & improvement efforts	Support national & regional youth sports events linked to environmental improvement	ELMS
Environmental Law & Sustainable Development	National Environmental Law	To ensure equal access in the region to legal protection & remedies	Strengthen & harmonize national environmental laws, procedures & enforcement	ELMS
	International Environmental Law	To Strengthen regional role & application of international environmental law	Strengthen regional capacity to consider negotiate & apply international law	ELMS
		To avoid or resolve environment disputes in the SADC region	Establish a regional capacity to resolve environmental disputes	ELMS

Table 4.1 (Cont.)

Policy Areas	Priority Issues	Objectives	Programme Areas	SADC
Environmental Monitoring, Assessment & Reporting	Environmental Monitoring & Assessment	To monitor environmental quality & resource use in the SADC region	Link & expand regional environmental monitoring networks	ELMS
		To ensure local & regional development is environmentally sustainable	Harmonize EIA regulation & procedures in the SADC region	ELMS
	Environmental Research & Training	To expand environmental research & improve testing facilities	Establish regional environmental research programme & network	ELMS
			Establish a regional network of environmental testing laboratories	ELMS
	State of the Environment Reporting	To report regularly on regional environmental conditions & trends	Prepare regional reports on environmental conditions & trends	ELMS
Economics of Sustainable Development	Economic, Equity & Environmental Impact Assessments	To make development more economically, socially & environmentally sustainable	Develop regional guidelines & EIA, methodologies for key policy areas	ELMS
	Economic Incentives & Desincent. for Sustainable Development	To influence private decision-making in support of sustainable development	Use fiscal & other economic incentives & disincent. to support sustainable develop.	ELMS
	Assessing Progress toward Sustainable Development	To monitor & report on national & regional progress toward sustainable development	Develop new indicators, national accounts & reports on sustainable development	ELMS
Institutional Strengthening & Capacity Building	Regional Institutions for Environment & Sustainable Development	To secure environmental improvement for sustainable development	Assess feasibility of regional environmental agency & technical cooperation	ELMS
	Capacity Building for Sustainable Development	To expand & make the best use of environmental expertise in the region	Create strategy & network of environmental education & training centers	ELMS
			Establish a register of environmental expertise in the SADC region	ELMS

3. Strategic Priorities for Action

Once the proposed programme and activities have been assessed in terms of their contribution to economic social and environmental sustainability, the next most crucial feature of any strategy is the setting of priorities for the allocation of resources. SADC generally and the ELMS programme in particular have limited financial and staff resources, certainly far less than are needed to coordinate and carry out the SADC Environment and Sustainable Development Programme. What is now required are significantly greater resources with clear strategic priorities for allocating them effectively.

The first priority for any SADC programme is that the issues to be addressed are truly regional in their scale or impacts. All of the issues and projects in the proposed SADC Environment and Sustainable Development Programme fit into one or more of the following categories:

(a) *Major problems which are common to two or more countries* (e.g. land degradation, deforestation, water and sanitation, agrochemicals, hazardous wastes)
(b) *Resources and ecosystems shared by two or more countries* (e.g. the Zambezi River, migratory wildlife, international fisheries, the Kalahari-Namib)
(c) *Problems with transboundary impacts in two or more countries* (e.g. transboundary air pollution, pollution and siltation of international rivers)
(d) *Regional opportunities for mutual benefit and more sustainable use of natural resources* (e.g. a regional energy grid, a regional and household food security strategy)
(e) *Regional opportunities for mutual benefit through more effective use of the human and technical resources* (e.g. a regional network of specialized centres for environmental research and training, a Research and Development network on renewable energy sources or cleaner production technologies)
(f) *Global problems which will adversely affect all countries in the SADC region* (e.g. impact of climate warming on agricultural production)

The following five strategic categories will help define and set priorities for raising and allocating the necessary resources.

(a) *Assessing environmental conditions, trends and progress made and needed for sustainable development* (e.g. establishing regional networks for environmental monitoring, testing and research; preparing regional state of the environment reports; creating new sustainable development indicators and regional guidelines for national accounts and reports on progress made and needed).
(b) *Reducing significant threats to human health, ecosystems and future development* (e.g. agrochemical pollution; dumping of hazardous wastes; land degradation and desertification; the fuelwood crisis of the poor majority without affordable alternatives which drives deforestation, loss of habitats and biodiversity, soil erosion, siltation of rivers and coastal ecosystems, and micro-climate change).
(c) *Breaking away from unsustainable to sustainable development for the benefit of present and future generations* (e.g. applying common EIA requirements and procedures in the region; establishing regional guidelines for economic, social and environmental sustainability in key policy areas such as land management; creating a regional R&D network, register and advisory service on cleaner production technologies)
(d) *Managing shared natural resources on an equitable and sustainable basis* (e.g. the Zambezi and other international river basins; migratory wildlife; shared fisheries)
(e) *Accelerating regional integration and capacity building for sustainable development* (e.g. regional harmonization of environmental laws and standards; a network of specialized regional centres for environmental research, education and training; new regional partnerships for sustainable development among government, industry and NGOs)

To facilitate the priority setting process, all of the projects in the Environment and Sustainable Development Programme are listed in Table 4.2 according to these five strategic categories.

The programme areas and activities are listed in two columns, those to be coordinated directly by ELMS and those to be coordinated by other SADC units. ELMS will have the lead responsibility to coordinate and monitor progress for the implementation of the overall Environment and Sustainable Development Programme.

Table 4.2
Strategic Categories and Activities for the SADC Environment and Sustainable Development Programme

Category	ELMS	Other SADC Sectors
Assessing environmental conditions, trends & progress made & needed for sustainable development	Prepare regional reports on environmental conditions & trends	
	Link & expand regional environmental monitoring networks	
	Establish a regional network of environmental testing laboratories	
	Complete a regional land capability study & sustainable land use plan	
Reducing significant threats to human health, ecosystems & future development	Strengthen & implement the Kalahari-Namib & Desertification Action Plans	Develop a regional & household food security strategy
	Assess and implement best options for reducing emissions causing soil & water acidification	Set & apply regional guidelines on supply & use of agrochemicals & expand non-chemical methods
	Harmonize water quality standards to protect human health & aquatic ecosystem	Get regional agreement on the control & disposal of hazardous wastes
	Set & harmonize basic health & environmental quality standards in the region	Strengthen regional networks & capacity on flood & drought forecasting & prepare contingency plans
		Establish a regional programme & fund for the adequate supply of safe water & sanitation in human settlements
		Make a long term agricultural strategy adapted for adverse climate & economic conditions
		Establish a SADC R&D network on best wood stoves
		Expand sustainable forestry & agroforestry programmes
		Assess & reduce land degradation & water pollution from mining
		Create a SADC R&D network & regional "Power to the People" Project Fund
Breaking away from unsustainable to sustainable develop. for the benefit of the present & future generations	Use fiscal & other economic incentives & disincentives to support sustainable development	Establish a register & advisory service on energy efficient & cleaner production technologies
	Strengthen & harmonize env. laws, procedures & enforcement	Get regional agreement on environmental health & safety at work
	Harmonize EIA regulations & procedures in the region	Integrate env. in a regional investment code (e.g Polluter-Pays Principle)

Table 4.2 (cont.)

Category	ELMS	Other SADC Sectors
Breaking away from unsustainable to sustainable development (cont.)	Develop new indicators, national accounts & reports on sustainable development	Assess issues & areas for greater share of the poor majority in development decisions& benefits
	Develop regional guidelines & EIA, methodologies for key policy areas	
Managing shared natural resources on an equitable & sustainable basis	Strengthen & accelerate the implementation of the Zambezi Action Plan	Implement regional strategy for wildlife management & ranching
	Prepare & implement management plans for all shared water & an overall regional plan	Implement regional management plans for marine fisheries & resources
	Establish a regional biodiversity strategy network of parks & protected areas	Harmonize fish management regulations & expand fish farms
Accelerating regional integration & capacity building for sustainable development	Create strategy & network of regional environmental education & training centres	Implement regional energy master plan with greater R&D investments in renewable sources
	Establish a regional network & centre on environmental information & education materials	Link & strengthen agriculture R&D networks, especially improved farming methods & crop & livestock varieties
	Strengthen regional capacity to consider, negotiate & apply international environmental law	Implement a regional strategy on affordable building materials & codes
	Establish regional environmental research programmes & networks	Establish a regional programme & procurement facility on public transport
	Establish a register on environmental expertise in the region	Expand participatory wildlife management programmes to other countries
	Establish a regional capacity to resolve environmental disputes	Create a regional business forum on sustainable development
	Support regional NGO networks & participation in SADC programmes	
	Support national & regional youth sports events linked to environmental improvement	
	Assess feasibility of regional environmental agency & technical cooperation	

4. Organizational Implications

A significant strengthening of existing institutional arrangements will carry out the new SADC Environment and Sustainable Development Programme. The existing "SADC Decision-making Structure and Sectors" are shown in Table 2.3 in Part 2. The following new arrangements refer largely to the ELMS component of the SADC programme. Sections (a) and (b) refer to SADC intergovernmental arrangements and sections (c) and (d) to SADC ELMS Coordination Unit and intersectoral arrangements. A new "SADC Decision-Making Structure for the Environment and Sustainable Development Programme " is shown in Table 4.3.

While Changes in existing arrangements for the annual meeting of the Committee of Ministers are included, no new permanent bodies are proposed. Although project task forces will be needed, they should have clear goals and terms of reference to be achieved within a specified time period at which point they will automatically disband.

(a) Committee of Ministers of Environment

At present the ELMS programme is considered at the annual meetings of the FANR Committee of Officials held prior to the annual SADC Summit every August.

The link to the FANR Sector should be maintained but the scale and scope of the new Environment and Sustainable Development Programme requires the attention of a meeting of SADC Committee of Ministers of Environment at least once a year. The SADC Committee of Ministers of Environment would report directly to the SADC Council of Ministers.

In addition to assessing progress made and needed in implementing the SADC Environment and Sustainable Development Programme, meetings of the SADC Committee of Ministers of Environment should include a session reserved exclusively for policy discussion on urgent or emerging regional, African and global environmental policy issues. The meeting should also consider links and cooperation with major international organizations and programmes such as the African Ministerial Conference on the Environment (AMCEN), the UN Commission on Sustainable Development and UNEP.

(b) Technical Committees

There will be three ELMS Technical Committees, for Land Management, Environment Management and Water Resources Management. The main functions of the technical committees include the review and approval of regional policies, plans, priorities and project workplans and budgets in their area of expertise and the monitoring and assessment of progress made and needed in implementing the relevant parts of the SADC Environment and Sustainable Development Programme.

Membership would consist of the most senior officials in each country in the relevant policy or technical area. Technical Committees would meet at least once annually and report to the meeting of Committee of Ministers of Environment. The Technical Committees should have specific terms of reference with clearly defined goals and tasks.

(c) SADC-ELMS Co-ordination Unit

The present ELMS Coordination Unit should be strengthened to coordinate the formulation and the implementation of policies, strategies, programmes, projects and activities in the Environment and Sustainable Development Programme.

As anticipated in the 1992 SADC Treaty, the regional environment programme staff should become fully regional in its status and character. For example, the regional staff should be recruited from all member countries, be fully independent of any one country and dependent on all members.

In addition to the essential core regional staff, the staff could also include experts seconded by member governments for specific projects and tasks.

(d) Intersectoral coordination and cooperation

Coordination and cooperation among the different SADC sectors and policy areas needs to be significantly strengthened at the national and regional levels. At the national level the SADC programmes in each sector are rarely known outside the concerned Ministry and, even in that Ministry, are often not well known apart from those working closely with the SADC delegate for that sector. With the new commitment to regional integration and the intersectoral character of most sustainable development issues, inter-Ministerial coordination and cooperation on setting and implementing regional programmes must be strengthened by, for example, creating special inter-Ministerial task forces on key regional policy issues, programmes or major projects with significant intersectoral implications (e.g. ZACPLAN).

At the regional level, consultation and cooperation among the 18 SADC coordination units remains limited. With the exception of the FANR group of 8 SADC units plus SACCAR, coordination is largely confined to activities in the sector and rarely extends to other sectors. Although many existing and most emerging issues cross sectoral boundaries, intersectoral projects carried out by two or more SADC units are rare. Intersectoral cooperation and implementation must increasingly become the rule rather than the exception, especially for the Environment and Sustainable Development Programme.

(e) Use of experts and consultants

There are well qualified experts in the public and private sectors in the SADC region to advise and assist in the implementation of most of the projects in the Environment and Sustainable Development Programme. Experts from outside the region should not be needed or required in most cases. Experts from the region generally have a better understanding of local problems and constraints than external experts. Moreover, external experts usually demand far higher fees and travel costs.

In implementing the Environment and Sustainable Development Programme, experts from the region should be used whenever possible and be paid competitive rates. As a general rule, external experts should not be used unless a clear case is made that the necessary expertise is not available in the region. Even then, the use of external experts should be linked to a specific capacity building programme to make sure that expertise is developed and available in the region in the future.

Top experts working in member government should also be considered for at least short-term consulting assignments of 2 to 6 weeks annually to help implement the programme. To facilitate this, member governments should consider adopting special provisions for granting leave to their top experts for important short term SADC consulting assignments. By being able to periodically tap their expertise, the SADC programme and members benefit. Also, the additional consulting assignment income would augment the generally low salaries of public servants and encourage top experts to remain in the public service.

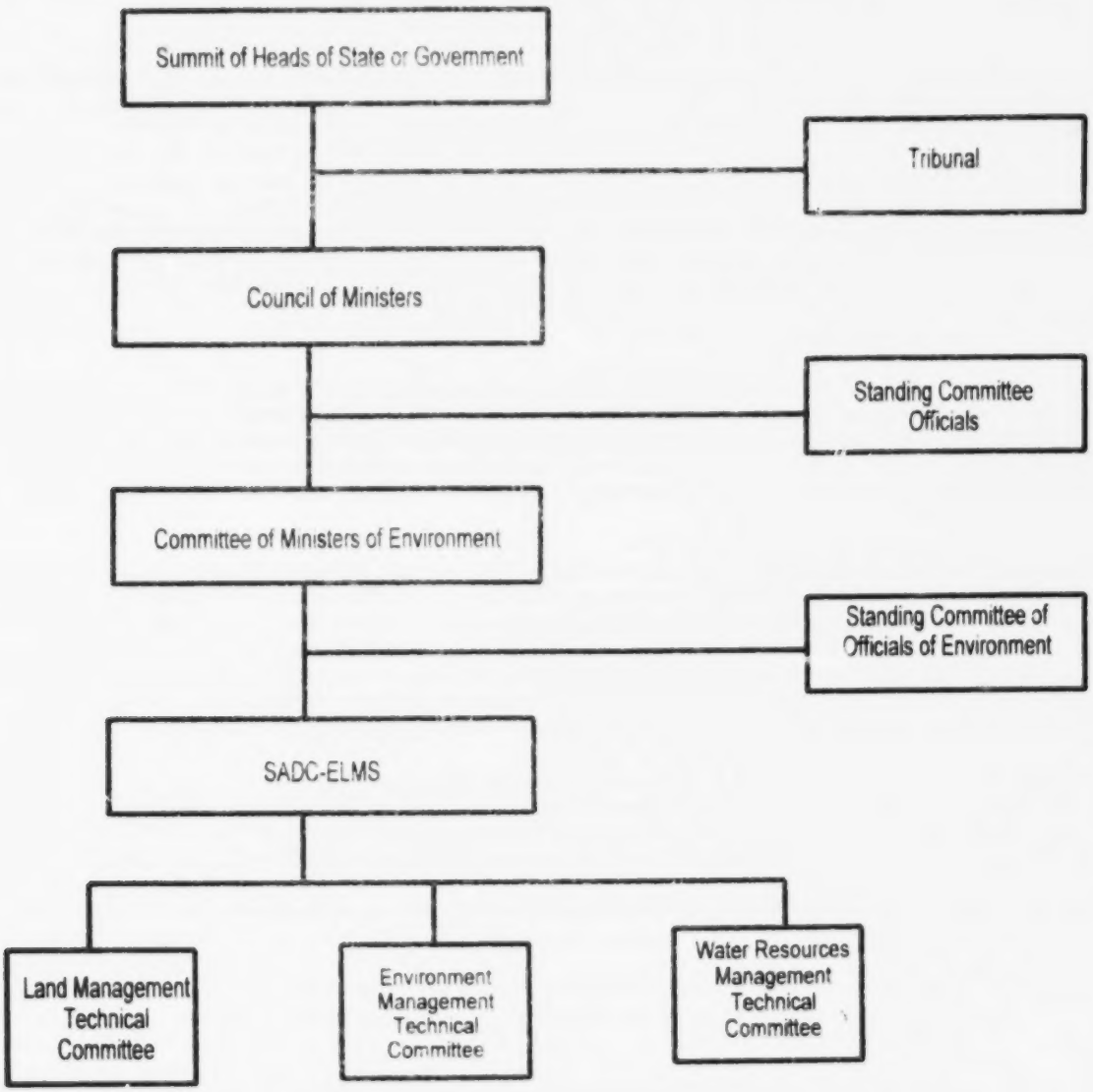
While experts in most key areas are available in the region, more experts are needed in most countries in nearly all areas of expertise in the environment and resource management fields (e.g. soil scientists, biologists, water engineers, environmental lawyers, etc.). However, no SADC member can afford either the training programmes and facilities to meet national needs across the full range of requirements or to finance training abroad for more than a limited number each year. To accelerate progress toward sustainable development in and among SADC countries, a regional environment training strategy must be developed as a top priority, including a 10-year plan and commitment to gradually build a network of specialized regional training centres.

(f) Participation of the business community and NGOs

One of the most innovative and productive features of the Earth Summit was the participation of representatives of the business community and NGOs in the intergovernmental discussions before and at the conference. One of the main messages from the 1992 Earth Summit was the need for strengthening those new partnerships for sustainable development at the national and international levels, especially among governments, the business community and NGOs.

On environment and resource management issues there is a lot of relevant expertise and capacity in the private sector and NGO community throughout the SADC region. National business councils and forums on sustainable development already exist in several countries and should be encouraged to form a regional association for contributing to the preparation and implementation of the SADC Environment and Sustainable Development Programme.

Table 4 3
SADC Decision-Making Structure for the
Environment and Sustainable Development Programme



Community based NGOs have already made significant contributions to local environmental improvement efforts in many countries. In the last decade national wildlife organizations and environmental NGOs have increased in number and effectiveness and are now linking up in a regional network.

Experts and representatives from the business community and relevant NGOs should be invited to contribute to and participate in all meetings, seminars and workshops associated with the SADC Environment and Sustainable Development Programme, including intergovernmental meetings though without the right to vote. They should also be involved in planning and implementing projects where they have special experience and expertise.

Special efforts must also be undertaken to make SADC programmes better known among the public. The pace and scale of change toward regional integration and sustainable development will be slowed or blocked unless the advantages are clearly understood and supported by the majority of people in the region.

Involving NGOs in regional project planning and implementation will certainly help but other approaches should also be considered, including a regional centre and network on environmental information for the public and schools, periodic TV programmes highlighting key regional issues and successful SADC projects, public hearings in local communities likely to be affected by SADC sponsored projects and other innovative programmes such as regional youth sports events only for teams involved in local community improvement projects such as tree planting, garbage cleanup or other conservation activities.

5. Funding Implications

SADC countries need to set and increasingly finance their own priority programmes for regional environmental improvement and sustainable development. What has previously been done or left undone at the regional and even national levels has largely been determined by the availability of funds which often meant the availability of external donor funds. As noted in the opening paragraph of this report, the transition toward sustainable development in the SADC region will consist of a series of critical transitions in key policy areas, including a development budget transition from aid dependence to self reliance.

For the new SADC Environment and Sustainable Development Programme, projects should be included only if they are in the *mutual interests* of the participating countries (e.g. for each country the cost of joint action is clearly more cost-effective than unilateral action or is far less expensive than the later damage costs if no action is taken) or for the mutual benefit of participating countries (e.g. sustainable use of shared natural resources). In sum, all countries and national environmental agencies in the region are confronted by escalating environmental problems but have only limited staff and financial resources for dealing with them effectively. The reallocation of any resources from national to regional programmes can only be justified if there are clear net benefits.

Although difficult for the initial few years, the eventual goal should be to prepare and agree on a workplan and budget for each project based entirely on the availability of local resources. Within 5 to 10 years most projects should proceed on a largely independent basis. If external funds are subsequently made available they can then be used to accelerate implementation and complete the project sooner so that local resources can be released and redirected to other priority issues.

National contributions to SADC regional programme can take a variety of forms. A summary list of some of the main options follows.

(a) *Assessed contributions:* Although a core group of experts and administrative staff plus basic overheads are essential to start and manage the programme effectively, it is increasingly difficult to get such 'core funding' from most aid donors. Even when available, core funding by aid agencies renders the programme vulnerable to unilateral shifts in foreign aid policies and funding levels. A guaranteed level of core funding from member countries through an equitable system of assessed contributions is initially desirable and inevitably necessary. Periodic reviews need to be carried out on the criteria and levels for assessed contributions

b) *Voluntary contributions:* Members and other interested parties can make voluntary contributions for implementing the overall programme or, more likely, to support specific projects in which they have a direct interest or expectation of significant net benefits.

(c) *Secondments:* Members and other interested parties can make short term secondments (e.g. several weeks to a few months) or longer term secondments (e.g. one to two years) of top experts to help accelerate work on regional projects of national interest, or of talented junior staff who would benefit from wider regional experience before assuming greater national responsibilities.

(d) *Services in kind:* In addition to seconded staff, host countries for existing SADC coordination units already provide significant services in kind (e.g.) free office space and equipment, telecommunications, facilities and administrative support for meetings, etc.). Lead countries for regional projects and host countries for meetings could provide similar services in kind.

However, both assessed and voluntary contributions have some serious limitations. For example, with assessed contributions the smallest and largest contributors often combine to veto budget increases even though a majority of countries consider new projects are needed and justified. Voluntary contributions can be used to supplement assessed budgects but, as they are discretionary, unpredictable and often short term, they provide little security or continuity for planning and implementing longer term environmental programmes.

Additional revenue raising or cost reduction options need to be considered. One option for reducing regional expenditure and demands on the programme budget is to apply cost-recovery or basic user charges for particular regional services (e.g. water use charges, use of regional environmental testing laboratories). Another option for raising additional revenue for regional environmental programmes is to introduce special regional levies (e.g. a regional surcharge in the Zambezi Basin to help finance key ZACPIAN projects). Options for regional funding mechanisms for special regional projects should also be identified and assessed.

In the short term SADC members should focus on the self-financing of at least the core staff and costs of the regional secretariat while seeking external assistance for launching priority activities in the new programme. However, the presentation of the programme to donors should be linked to a commitment and eventual plan for the gradual replacement of external aid by local funds. The cost estimated in a detailed programmed proposal and budget should also reflect any commitments of funds by SADC members and the estimated value of services-in-kind offered by SADC members.

The longer term goal should be to fund the SADC Environment and Sustainable Development Programme entirely through a combination of assessed and voluntary contributions as well as other revenue raising and cost recovery measures. A detailed feasibility study and plan should be completed as soon as possible for making the SADC Environment and Sustainable Development Programme a truly independent and locally financed programme within a decade.

6. A SHARED Programme and Future

Most international organizations and programmes, however concise their official title may be, are inevitably referred to by some abbreviation or acronym.

While the formal title will remain as the "SADC Environment and Sustainable Development Programme", it is also a 'SoutHern AfRican Environment and Sustainable Development Programme' which provides a convenient basis for an appropriate and short title: the **"SHARED Programme"**.

This shorthand title underlines the ***shared responsibility*** and commitment of SADC countries to ***share information*** and expertise on ***shared environmental problems*** and natural resources for achieving sustainable development and securing their ***shared future***.

ANNEX

Key SADC Sectors and Agenda 21

A summary follows on relevant Agenda 21 goals, priority programmes and recommendations for action for key SADC policy sectors. Although the SADC Food, Agriculture and Natural Resources (FANR) group of policy areas and sectors are particularly important for environment and natural resource management, other key SADC sectors such as Energy, transport communications, and Industry and Trade also have relevant responsibilities.

A maximum of only three of the most relevant recommendations for the SADC region are cited for each priority programme. The excerpts are from the "Agenda 21 Summary for Decision-Makers" (Munro, 1993). The relevant paragraph number in the official UNCED report (A/CONF. 151/26) appears in brackets after each recommendation.

(a) SADC Agriculture, Food Security and livestock Sectors

Agenda 21 includes the following 2 main policy goals and 13 priority programmes on sustainable agriculture, food security, livestock, rural development and the role of farmers. Together the priority programme areas contain over 200 recommendations for action. Some of the most relevant recommendations for SADC countries include:

Goal 14: Ensure Sustainable Agriculture and Rural Development

A. Strengthen policies and programmes for sustainable food production and security
Expand regional research and policies for sustainable agricultural development (14.9i)
Implement regional strategies for sustainable agriculture and food security (14.11a)
Improve regional transfers of information and environmentally sound technologies (14.11c)

B. Increase public participation and education for sustainable agriculture
Strengthen cooperation with NGOs and local groups for sustainable rural development (14.20a)
Build an international network with NGOs on sustainable agricultural practices (14.20b)
Train public officials and local groups in participatory approaches to rural development (14.23)

C. Improve farm production and farming systems
Assess the status and characteristics of major agro-ecosystems in the region (14.29)
Increase research on agricultural production systems in different agro-ecological zones (14.31)
Expand rural credit and infrastructure for processing, transporting and marketing products (14.33b)

D. Strengthen agricultural land resources planning and education
Strengthen regional working groups on integrated use of land resources for agriculture (14.39a)
Develop databases and geographic information systems for agro-ecological zones (14.41a)
Increase agricultural resource survey, management and development capabilities (14.43b)

E. Rehabilitate degradated lands and protect vulnerable areas
Provide advisory services for priority conservation and rehabilitation programmes (14.48a)
Establish international exchange networks on conservation and rehabilitation technologies (14.48b0
Train extention staff and land users on land conservation and rehabilitation techniques (14.51)

F. Manage water resources for sustainable food production and rural development
See Goal 18, priority programme area F.

G. Ensure the conservation and sustainable use of plant genetic resources
Develop a regional networks of protected areas for plant genetic resources (14.60b)
Prepare periodic regional status reports on plant genetic resources (14.60c)
Formulate a regional action plan for plant genetic resources (14.60d)

H. Ensure the conservation and sustainable use of animal genetic resources
Establish regional gene banks, especially among developing countries (14. 69a)
Establish a watch list and early warning system for endangered animal breeds (14.69b)
Formulate and monitor international standards and agreements for animal genetic resources (14.69b)

I. Increase integrated pest management and control in agriculture
Establish a regional information system on the annual use and effects of pesticides (14.78a)
Create regional networks to demonstrate benefits of integrated pest management (14.78b)
Improve institutions and laws for transferring integrated pest management technologies (14.82)

J. Sustain plant nutrition to increase food production
Asseas plant nutrient needs and improve supply strategies for efficient and productive farming (14.86c)
Conduct participatory research on specific technologies at benchmark sites and farms (14.90a)
Expand interdisciplinary research and international transfer of relevant technologies (14.90b)

L. Assess the effects of ozone layer depletion on plants and animals
Assess effects of enhanced ultraviolet radiation on plant and animal life and agriculture (14.104)
Take appropriate remedial measures in the region (14.104)

Goal 32: Strengthen the Role of Farmers

Link research centres and farmers groups on environmentally sound farming practices (32.7a)
Establish networks for exchanging experience on farming and sustainable development (32.7b)
Involve farmers representatives in international meetings on rural development (32.9)

(b) SADC Forestry Sector

Agenda 21 includes the following *main policy goal and 4 priority programmes* for combating deforestation. Together the priority programme areas contain over *115 recommendations for action.* Some of the most relevant recommendations for SADC countries include:

Goal 11: Combat Deforestation

A. Sustain the multiple roles and functions of forests and woodlands
Collect and assess data on forest cover, resources, ecological functions and pressures (11.4a)
Facilitate the transfer of relevant expertise, research results and technologies (11.5)
Provide special in-service training for staff in forest-related agencies (11 .8c)

B. Strengthen forest conservation and rehabilitate degraded areas
Coordinate research on carbon sequestration, air pollution and other environmental issues (ll.l5b)
Strengthen international institutional capacity to support sustainable forest management (ll.l5d)
Provide specialized training in forest planning, management and conservation (11.18a)

C. Ensure the efficient and sustainable use of forest resources
Provide adequate technological information for the better use of forest products (11.23e)
Develop and use environmentally sound and less polluting technology (11.26b)
Improve capability for research, planning, economic analysis and evaluation (11.27c)

D. Strengthen the monitoring, planning and management of forest resources
Monitor and assess the status and trends for forest cover and forest resources (11.31a)
Strengthen regional and global networks and information exchange on forest resources (11.33c)
Strengthen regional institutional capacity on sustainable use of forest resources (11.33d)

(c) SADC Fisheries and Marine Resources Sector

Agenda 21 includes the following main policy goal and 6 *priority programmes* on the integrated management and sustainable use of coastal and marine resources, the assessment of climate change on the marine environment and expanded international cooperation. Together the priority programme areas contain over 250 *recommendations for action.* Some of the most relevant recommendations for SADC countries include:

Goal 17: Protect Oceans and Marine Resources

A. Ensure integrated management and sustainable use of coastal and marine areas
Build databases for assessing and managing coastal zones, seas and resources (17.8a)
Prepare national guidelines on integrated management and sustainable use of coastal areas (17.11)
Support centres of excellence for integrated coastal and marine resources management (17.17g)

B. Protect the marine environment from land and sea-based pollution
Assess and improve regional agreements on marine pollution from land-based sources (17.25b)
Establish a clearing-house for marine pollution control information and technologies (17.37f)
Improve marine research, monitoring and assessment capabilities in the region (17.40)

C. Ensure sustainable use of marine living resources of the high seas
Assess high seas resources potential and develop profiles of all fish stocks (17.57)
Support work of other agencies on the conservation and management of marine mammals (17.61c)
Increase international cooperation on the conservation and management of cetaceans (17.62)

D. Ensure sustainable use of marine living resources in national jurisdictions
Increase contribution of marine living resources to food security in the region (17.87b)
Develop criteria for fishing practices to minimize waste and catch of non-target species (17.87c)
Expand multidisciplinary research, education and training on marine living resources (17.93 a)

E. Assess the impact of climate change on the marine environment
Monitor coastal habitats, fisheries, marine pollution sources and sea level changes (17.105c)
Integrate regional monitoring programs into the Regional Seas Programme (17.106)
Assess likely effects of climate change on the coastal environment and infrastructure (17.106)

F. Strengthen international cooperation to protect oceans and marine resources
Expand regional agencies and programs on the marine environment and resources (17.119a)
Strengthen coordination of global and regional marine environment and resources programs (17.119b)
Develop a comprehensive education and training program in the marine sciences (17.122)

(d) SADC Inland Fisheries Sector

Agenda 21 includes the following *main policy goal and 3 priority programmes* on protecting water resource quality and aquatic ecosystems and expanding aquaculture. Together the priority programme areas contain over 70 *recommendations for action.* Some of the most relevant recommendations for SADC countries include:

Goal 18: Protect the Supply and Quality of Water Resources

C. Protect water resources quality and aquatic ecosystems
Strengthen laws on pollution monitoring and control in national and transboundary waters (18.40h(i))
Control and monitor water quality for the sustainable development of inland fisheries (18.40f(i))
Protect ecosystems from degradation to allow development of aquaculture projects (18.40f(ii))

F. Manage water resources for sustainable food production and rural development
Prevent or mitigate adverse impacts on aquatic living resources and ecosystems (18.76h(iii)
Improve fish yields in inland waters using environmentally sound management methods (18.76h(iv))
Collect and assess data on water quality, quantity, morphology and living aquatic resources (18.76h(v))

Expand aquaculture
Assess the environmental impacts of aquaculture, especially commercial operations (18.76i(iii))
Evaluate economic feasibility of aquaculture compared to other uses of water resources (18.76i(iv))
Accelerate use of appropriate water related farming and fishing technologies (18.78c)

(e) SADC Environment and Land Management Sector

Agenda 21 includes the following 14 main policy goals and *36 priority programmes* on sustainable land use, protecting the atmosphere, combating desertification and drought, water resources management, creating new partnerships for sustainable development, environmental education and training, strengthening international law, cooperation and dispute settlement procedures. Together the priority programme areas contain over *760 recommendations for action.* Over a third of those recommendations are on water resource management. Some of the most relevant recommendations for SADC countries include:

Goal 7: Ensure Sustainable Human Settlements

C. Ensure sustainable land use planning and management
Establish land use classifications including environmentally fragile areas (7.29)
Strengthen international coordination of land resource management activities (7.31)
Expand training on sustainable land resource planning and management (7.34)

Goal 9: Protect the Atmosphere

A. Improve the scientific basis for decision-making
Assess impact of atmospheric change on natural processes and sustainable development (9.8a)
Improve capacity to predict and assess impacts of atmospheric change (9.8c (ii))
Develop methods to identify critical threshold levels of atmospheric pollutants and gases (9.8d)

C Prevent stratospheric ozone depletion
Adopt and implement the Montreal Protocol and its 1990 amendments (9.24a)
Assess the health, environmental and other impacts and implications of ozone layer depletion (9.24c)
Replace CFC's and other ozone depleting substances (9.24e)

D. Reduce transboundary atmospheric pollution
Strengthen regional cooperation and agreements on transboundary air pollution control (9.28a)
Improve early warning and response systems on industrial accidents and natural disasters (9.28b)
Strengthen capacity to assess and reduce atmospheric emissions and their adverse impacts (9.28d)

Goal 10: Ensure Integrated Planning and Management of Land Resources

A. Adopt an integrated approach for planning and managing land resources
Design regional policies to support programs for land use and physical planning (10.12a)
Support the development of land use and physical plans in the region (10.12b)
Facilitate transfer of technologies to support sustainable land use and management (10.17)

Goal 12: Combat Desertification and Drought

A. Assess scientific, social and economic aspects of desertification and drought
Strengthen international programs to combat drought and desertification (12.10a)
Develop a comprehensive desertification, land degradation and human conditions database (12.10b)
Establish indicators and benchmark for assessing progress in combating desertification (12.10c)

B. Increase soil conservation, afforestation and reforestation programs
Improve coordination of international programs for combating land degradation (12.20a)
Facilitate the development and use of technologies to combat dry land degradation (12.20b)
Strengthen the coordinating role of subregional intergovernmental organizations (12.21)

C. Reduce poverty and provide livelihood alternatives in vulnerable areas
Exchange information on technologies to improve land and labour productivity (12.30a)
Coordinate international programs to alleviate poverty and improve livelihoods (12.30b)
Train extension officers in participatory approaches to integrated land management (12.33b)

D. Integrate anti-desertification programmes in sustainable development plans
Develop anti-desertification action plans as integral pans of development plans (12.37b)
Build national monitoring and coordination systems with links to international networks (12.39)
Provide public information, education and training on combating drought and desertification (12.43)

E. Develop drought contingency and relief programs for environmental refugees
Establish regional capacity for responding quickly to drought related emergencies (12.50a)
Strengthen regional programs for drought monitoring, assessment and control (12.50b)
Expand regional programs for mitigating the effects of drought and emergencies (12.50d)

F. Expand participation and education on desertification and drought control
Support regional programmes to improve participation of NGOs and local communities (12.59a)
Facilitate regional cooperation on and transfer of relevant technologies (12.59b)
Improve regional cooperation and coordination of environment and development programs (12.59c)

Goal 13: Improve the Management of Mountain Ecosystems
Expand research on mountain ecosystems and sustainable development (13.7)
Ensure integrated watershed development and provide alternative livelihoods (13.16)

Goal 18: Protect the Supply and Quality of Water Resources

A. Ensure the integrated management and development of water resources
Establish independent monitoring and regulatory bodies for freshwater resources (18.120(ii))
Harmonize national water management strategies at the regional level (18.120(iii))
Improve coordination of regional agencies and programmes on water management (18.120(iv))

B. Assess water quality, supply and demand
Increase riparian cooperation on assessing transboundary water resources (18.27a(iv))
Strengthen research and water resources assessment programs (18.27d(9))
Accelerate the development and transfer of water resource technologies (18.30)

C. Protect water resources quality and aquatic ecosystems
Strengthen laws on pollution monitoring and control in national and transboundary waters (18.40b(i))
Expand laws to control accidental or deliberate spills in national or transboundary waters (18.40(iii))
Strengthen legal requirements for environmental impact assessments (18.40(iv))

D. Improve drinking water supply and sanitation
Strengthen national and local water management agencies (18.50b(i))
Increase number and training of water and sanitation professional and technical staff (18.53)
Expand regional technical cooperation on water and sanitation (18.55)

E. Ensure sustainable water supply and use for cities
Implement water, sanitation and waste management programs for the urban poor (18.59f(i))
Increase information exchanges on low cost sanitation and waste disposal technologies (18.61)
Improve monitoring programs and economic and regulatory instruments (18.63)

F. Manage water resources for sustainable food production and rural development
Develop long-term strategies for agricultural use of scarce water resources (18.76f(i))
Increase cooperation and coordination within and among water management agencies (18.81c)
Improve international exchange of information on water management technologies (18.81f)

C. Assess the impact of climate change on water resources
Assess the likely effects of climate change on freshwater resources and flood control (18.85b)
Increase participation in international research programmes on climate change (18.85g)
Build national capacity to prepare and implement climate change response strategies (18.90)

Goal 27: Strengthen the Role of NGOs
Include NGOs in processes at all levels to assess the implementation of Agenda 21 (27.9d))
Improve NGO access to data and information on sustainable development (27.9g)
Provide international training to improve NGO effectiveness as Agenda 21 partners (27.14

Goal 31: Strengthen the Role of the Scientific Community

A. Improve cooperation among the scientific community, government and public
Support and strengthen regional and public/private cooperation for sustainable development (31.4b)
Expand contributions of scientific and technological community to international negotiations (31.4c)
Expand programs for disseminating scientific and technological research results (31.4e)

Goal 35: Strengthen Science for Sustainable Development

A. Strengthen the scientific basis for sustainable development
Assess costs and benefits of different development policies for human and environmental health (35 7e)
Conduct and coordinate studies on national and regional pathways to sustainable development (35.if)
Improve capabilities for setting national and regional scientific research priorities (35.7g)

B. Expand research on ecosystems, ecological processes and development impacts
Improve coordination and cooperation among national, regional and global research programs (35.14a)
Increase use of appropriate monitoring and information systems and technologies (35.14b)
Expand the Global Climate Observing System (35.14b)

C Improve long-term scientific assessments
Use research results to assess national and regional sustainable development issues (35.17a)
Improve methodology for integrated national and regional audits and a 5-year global audit (35.17b)
Increase support for national and regional data bases and warning systems (35.19)

D. Strengthen scientific capacity and expertise
Establish strong national and regional partnerships between industry and research agendas (35.22e)
Strengthen links with monitoring centres and assess sustainable development conditions (35.24b)
Strengthen global and regional scientific and technological information networks (35.26b)

Goal 36: Expand Education, Public Awareness and Training

A. Reorient education towards sustainable development
Integrate sustainable development in education at all levels by 1995 (36 5b)
Stan programme by 1994 to integrate Jomtien recommendations into regional programmes (36.5g)
Establish national and regional centres for sustainable development research and education (36.5j)

B. Increase public awareness
Expand national and regional public awareness programs for sustainable development (36.10c)
Cooperate with NGOs in joint public awareness programs for sustainable development (36.10h)
Improve cooperation with indigenous peoples on local environmental planning and management (36.10i)

C. Increase training
Integrate sustainable development issues into all training curricula (36.16)
Expand exchanges of information and experience on training methods and assessments (36.16)
Include environmental management in all training programs for all sectors of society (36.17)

Goal 37: Strengthen Mechanisms for International Cooperation
Develop consultative processes on international funding for national capacity building (37.9)
Improve regional consultations and information exchanges on implementing Agenda 21 (37.11)
Establish a regional mechanism for countries to review implementation of Agenda 21 (37.11)

Goal 38: Strengthen International Institutional Arrangements

I. Regional cooperation
Promote regional capacity building for sustainable development (38.29a)
Promote integration of environment in regional development policies (38.29b)
Promote regional cooperation on transboundary sustainable development issues (38.29c)

L. Non-governmental organizations
Recognize NGOs and major groups as key partners in implementing Agenda 21 (38.42)
Give special support to NGO networks in the region (38.42)
Improve NGO participation in Agenda 21 review and evaluation processes at all levels (38.43a)

Goal 39: Strengthen International Law

A. Strengthen international law in support of sustainable development
Assess periodically the effectiveness of international agreements and instruments (39.5)
Review periodically the priorities for future law making on sustainable development (39.5)
Examine feasibility of elaborating general principles and obligations of States (39.5)

B. strengthen implementation mechanisms for international law
Establish reporting systems on implementation of international legal instruments (39.8a)
Consider how best to further develop implementation mechanisms for international law (39.8b)

C. Ensure effective participation in international law making
Support national efforts in the region to implement international agreements and intruments (39.9)
Assist national efforts in the region to participate effectively in new negotiations (39.9)
Improve access of member countries to relevant information and expertise (39.9)

D. Strengthen capacity to avoid and resolve disputes
Study ways to broaden and improve methods for avoiding and resolving didputes (39.10)
Consider notification and consultation machanisms on threats to sustainable development (39.10)
Consider mechanisms for peaceful means of dispute settlement (39.10)

Goal 40: Improve Information for Decision-Making
A. Bridge the data gap
Harmonize development of sustainable development indicators at regional and global levels (40.7)
Incorporate sustainable development indicators in international reports and databases (40.7)
Coordinate and harmonize data collection at the national and international levels (40.9)

B. Improve the availability of data
Improve relevant sectoral information systems at the local, national and international levels (40.22)
Develop mechanisms for efficient and harmonized information exchanges at all levels (40.23)
Improve networks and coordination of information on sustainable development projects (40.24)

(f) SADC Energy Sector

Agenda 21 includes the following 3 main policy goals and priority programmes on sustainable energy systems in human settlements, the reduction of the atmospheric effects of energy activities and the acceleration of the rural energy transition to increase productivity. Together the priority programme areas contain over 50 recommendations for action. Some of the most relevant recommendations for SADC countries include:

Goal 7: Ensure Sustainable Human Settlements

E. Ensure sustainable energy systems in human settlements
Meet biomass energy needs of the poor with reforestation and forest regeneration (7.51a(i))
Facilitate commercialization and wide use of renewable energy technologies (7.51a(iii))
Support national programs on energy saving and renewable energy technologies (7.51 b (i))

Goal 9: Protect the Atmosphere

B. Reduce adverse atmospheric effects of energy activities
Facilitate the transfer and use of technologies for environmentally sound energy systems (9.12d)
Improve the capacity to develop and use more efficient and less polluting forms of energy (9.12e)
Build capacity for improving energy efficiency and use of new and renewable energy sources (9.12i)

Goal 14: Ensure Sustainable Agriculture and Rural Development

K. Accelerate the rural energy transition to increase productivity
Intensify research and the development, diversification and conservation of energy (14.95c)
Exchange national experience on rural energy technologies and planning methodologies (14.97)
Assess and facilitate transfer of biomass and solar energy technologies (14.99b)

(g) SADC Transport and Communications Sector

Agenda 21 includes the following 2 *main policy goals and priority programmes* on sustainable transportation systems in human settlements and the reduction of the atmospheric effects of transportation. Together the priority programme areas contain over 45 *recommendations for action.* Some of the most relevant recommendations for SADC countries include:

Goal 7: Ensure Sustainable Human Settlements
E. Ensure sustainable transportation systems in human settlements
Ensure efficient and environmental sound urban transportation systems (7.52)
Facilitate international information exchanges on urban transportation (7.52e)
Strengthen education and training institutions on urban energy and transport services (7.54c)

Goal 9: Protect the Atmosphere
B. Reduce adverse atmospheric effects of transportation

Support cost effective, more efficient, less polluting and safer transport systems (9.13a)
Facilitate transfer of safe, less polluting and resource efficient transport systems (9.13b)
Convene regional conferences on transport and the environment (9.13f)

(h) SADC Industry and Trade Sector

Agenda 21 includes the following 7 main policy goals and 12 priority programmes on trade, industry, protection of the atmosphere, the management of hazardous wastes, worker health and safety, cleaner production technologies and the transfer and use of environmentally sound technologies. Together the priority programme areas contain over 260 recommendations for action. Some of the most relevant recommendations for SADC countries include:

Goal 2: Accelerate Sustainable Development in Developing Countries

A. Support sustainable development through trade
Ensure environment and trade policies are mutually supportive (2.10d)
Reduce subsidies and other measures supporting uncompetitive production (2.12)
Include environmental, social and resource costs in commodity prices (2.14c)

B. Make trade and environment mutually supportive
Develop a trade and sustainable development agenda (2.22)
Maintain dialogue between trade, development and environment communities (2.22b)
Ensure environment related trade measures conform to international obligations (2.22c)

Goal 7: Ensure Sustainable Human Settlements

G. Support sustainable construction industry activities
Expand use of local construction materials, technologies and small scale enterprises (7.69b)
Adopt building standards and regulations on energy efficiency and sustainable resource use (7.69c)
Transfer information and technologies for sustainable resource use in construction (7.70d)

Goal 9: Protect the Atmosphere

B. Reduce adverse atmospheric effects of development activities
Introduce policies to minimize industrial pollution and adverse impacts on the atmosphere (9.18a)
Facilitate transfer of safe, less polluting and more resource efficient industrial technologies (9.18c)
Use environmental impact assessments to induce sustainable industrial development (9.18d)

Goal 20: Strengthen the Management of Hazardous Wastes

A. Prevent and minimize the production of hazardous wastes
Develop regional agreements on transboundary movements of hazardous wastes (20.15)
Improve coordination of national and regional policies on hazardous wastes (20.15)
Strengthen cooperation on monitoring the effects of hazardous wastes management (20.15)

B. Strengthen hazardous wastes management and institutions
Improve regional and local capacity to assess, manage and reduce hazardous waste risks (20.24a)
Expand international information exchange and networks on hazardous wastes (20.31d)
Strengthen research, education and training centres on hazardous waste management (20.31f)

C. Improve cooperation on the transboundary movements of hazardous wastes
Develop regional conventions on transboundary movements of hazardous wastes (20.34b)
Improve capacities to monitor the transboundary movements of hazardous wastes (20.34d)
Set up national and regional tracking systems for movements of hazardous wastes (20.34f)

D. Prevent illegal international traffic in hazardous wastes
Set up information and alert systems to detect illegal traffic in hazardous wastes (20.43)
Monitor and assess the illegal traffic in hazardous wastes at the regional level (20.45)
Strengthen capacity to detect illegal traffic in the region (20.46)

C. Improve cooperation on the transboundary movements of hazardous wastes
Develop regional conventions on transboundary movements of hazardous wastes (20.34b)
Improve capacities to monitor the transboundary movements of hazardous wastes (20.34d)
Set up national and regional tracking systems for movements of hazardous wastes (20.34f)

D. Prevent illegal international traffic in hazardous wastes
Set up information and alert systems to detect illegal traffic in hazardous wastes (20.43)
Monitor and assess the illegal traffic in hazardous wastes at the regional level (20.45)
Strengthen capacity to detect illegal traffic in the region (20.46)

Goal 29: Strengthen the Role of Workers and Trade Unions

Ratify and implement ILO conventions on environmental health and safety (29.4)
Expand worker and trade union participation in sustainable development policies and programmes (29.5)
Improve training of workers on environmental safety, health and welfare (29.12)

Goal 30: Strengthen the Role of Business and Industry

A. Achieve cleaner production
Strengthen partnerships with industry to implement sustainable development programmes (30.7)
Expand international information, education and training programs for cleaner production (30.15)
Improve international information systems and networks on cleaner production (30.16)

B. Encourage responsible entrepreneurship
Increase support for sustainable development programs of small and medium enterprises (30.27)
Improve cooperation with industry on sustainable development strategies and programmes (30.28)
Increase support for improving environmentally sound technologies and management (30.29)

Goal 34: Improve the Transfer of Environmentally Sound Technology
Improve regional programs for transfer and use of environmentally sound technology (34.19)
Strengthen R&D cooperation and information exchange in the region (34.23)
Establish a regional clearing-house to:

* Link national, sub-regional, regional and international information systems (34.15)
* Disseminate information on sources, risks and terms for available technologies (34.15)
* Operate on an information-demand basis with focus on end-user needs (34.15)
* Help users identify and meet their needs (34.16)
* Report on successful applications of environmentally sound technologies (34.16)
* Facilitate joint ventures and partnerships for sustainable development (34.16)